Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands	)	WT Docket No. 02-353
	)	
	)	

NOTICE OF PROPOSED RULEMAKING

Adopted: November 7,2002 **Released:** November 22,2002

Comments Due: February 7,2003
Reply Comments Due: March 14,2003

By the Commission: Chairman **Powell,** and Commissioners Copps and Martin issuing separate statements.

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I. INTRODUCTION

1. In this Notice of Proposed Rulemaking we seek comment on service rules for Advanced Wireless Services (AWS) in the 1710-1755 MHz and 2110-2155 MHz bands, including provisions for application, licensing, operating and technical rules, and for competitive bidding. These frequency bands have previously been used for a variety of Government and non-Government services. The National Telecommunications and Information Administration (NTIA) identified the 1710-1755 MHz band for transfer from exclusive use by the Federal Government to the Commission for mixed use, effective in 2004, pursuant to the Omnibus Budget Reconciliation Act of 1993 (OBRA-93).[1] The 2110-2150 MHz band was formerly used by private and common carrier fixed microwave services, but in 1992 was identified by the Commission for reallocation to services using new and innovative technologies under its ***Emerging Technologies*** proceeding.[2] The 2150-2155 MHz band is used by the Multipoint Distribution Service.[3] Concurrently with this Notice, we are adopting an order allocating these frequency bands for fixed and mobile services so as to provide for the introduction of new advanced wireless services to the public.[4] It is important to note that both the clearing processes for these bands (including reimbursement of incumbents) and the Government operations that to some extent will continue to use them will significantly affect how these bands can be put to new use.[5]

2. In order for the communications industry to better serve the public, regulatory policy should strive to eliminate barriers to and facilitate the provision of new services. The 1710-1755 MHz and 2110-2155 MHz spectrum provides a significant opportunity for service advances. Our goal is for service providers to put this spectrum to its highest value use with minimal transaction costs. Within the limits of

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[1] Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, 107 Stat. 312 (1993) (OBRA-93). Under OBRA-93, "mixed use" means that some of the spectrum transferred from exclusive Government use can be partially retained for use by Federal Government stations. ***See*** 47 U.S.C. § 923(b)(2).

[2] ***See*** Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, ***First Reporr and Order and Third Notice of Proposed Rule Making,*** 7 FCC Rcd 6886 (1992).

[3] The Wireless Communications Association, the National ITFS Associatior. and the Catholic Television Network recently filed with the Commission a proposal regarding comprehensive changes to the regulatory structure governing MDS and ITFS. ***See*** Wireless Telecommunications Bureau Seeks Comment on Proposal to Revise Multichannel Multipoint Distribution Service and the Instructional Television Fixed Service Rules, ***Public Norice,*** DA 02-2732 (rel. Oct. 17, 2002).

[4] ***See*** Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No. 00-258, ***Second Report and Order,*** FCC 02-304 (adopted Nov. 7, 2002) (***AWS Allocation Order***). The terms "fixed service" and "mobile service" are defined in srction 2.1 of the Commission's rules based on international agreements, and encompass communications (a) between specified fixed points (fixed service) and (b) between mobile stations, or between a mobile station and a land station (mobile service). These terms do not encompass broadcast or satellite services. ***See*** 47 C.F.R. § 2.1.

[5] ***See infra*** ¶¶ 33-35

the fixed and mobile allocation, the market place and not the government should determine how this spectrum is used. Thus, our proposals allow flexibility for licensees to provide third generation (3G) and other advanced wireless services in the near term, while fostering innovation and agility so they can quickly adapt to changes in technological capabilities and marketplace conditions into the future. It is our hope that the licensing and service rules we propose below **will** benefit consumer; by giving them the services and value that they demand, and thereby provide the new business oppcrtunities necessary to support continued service enhancements by licensees.

II. BACKGROUND

3. The history of the commercial mobile radio services (CMRS)[6] is a positive story of technological advances making possible ever greater capabilities, and increasing public demand for the wireless services. Major technological advances implemented to date have included full-duplex transmission systems, frequency trunking, intensive frequency reuse in relatively small geographic areas (cellular), and digital air interfaces. Recent advances have focused on digital techniques capable of much higher data rates, and ultra-wideband and spread spectrum transmissions. Against this backdrop, the International Telecommunications Union (ITU) has been developing technical recommendations or standards for IMT-2000 systems, which could be used for the next generation of CMRS,[7] in order to minimize the number of different radio interfaces, maximize their commonality. and provide a transition path from earlier technologies.[8]

4. Parallel to these technology developments, the ITU has identified a number of frequency bands that could be used to implement next generation systems. In many countrier, because use of particular bands is restricted to specific technical standards, new technologies require new allocations? The situation is different, however, in the United States. In November 1999, the Commission issued a ***Policy Statement*** setting forth guiding principles for spectrum management activities in the new millennium.[10] Key among these principles is a policy favoring flexible allocations: allowing licensees greater freedom to determine the specific technologies to be used and services to be offered, and allowing licensees to negotiate among themselves arrangements for avoiding interference rather than applying mandatory technical rules to control interference."[11] Existing CMRS licensees in the United States are not

[6] The primary components of CMRS are currently the Specialized Mobile Radio Service (operating in the 800 MHz and 900 MHz bands and authorized under Pan 90 of our rules), the Cellular Radiotelephone Service (800 MHz band, **Part** 22), and the Broadband Personal Communications Service (1900 MHz band, Part 24). With our flexible use policies ***(see infra*** ¶¶ 10-12), other wireless services also have the potential to provide similar CMRS services. Likewise, with flexible use, licensees of the spectrum we address her.: would not necessarily be limited to providing CMRS services. However, we believe the dominant use for the foreseeable future would be CMRS services using a variety **of** technologies, including those described as advanced wireless services. ***See infra*** n.12, for a further description of these services.

[7] The next generation systems are commonly referred to as International Mobile Telecommunications-2000 (IMT-2000) or third generation (3G) systems. Their characteristics are described more fully in SPECTRUM *STUDY* OF *THE* 2500-2690 MHz BAND, FINAL REPORT, at 7-10 (OET/MMB/WTB/IB, Mar. 30,2001) (*FCC Final Spectrum Study*). A copy of this report has been placed in the docket file of ET Docket No. 00-258, and **is** available on the Internet at <http://www.fcc.govl3G>.

[8] ***See generally*** Amendment of Pan 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, **ET** Docket No. 00-258, ***Norice of Proposed Rule Making and Order,*** 16 FCC Rcd 596.598 ¶ 3 (2001) ***(AWS Allocation NPRM)***.

[9] ***See,*** *e.g.*, *FCC Final Spectrum Study*, at A-35 to A-36.

[10] ***See*** Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium *Spectrum **Policy** Statement*, 14 FCC Rcd 19868 (1999).

[11] ***See id.*** at 19870-71 ¶ 9.

limited to 1980s- or 1990s-era technologies," and many are already upgrading their facilities to employ state-of-the-art technologies, driven by entrepreneurial initiative and marketplace dynamics.

5. In the United States additional spectrum for advanced wireless services in particular, and for CMRS services generally, is needed primarily because of the explosive growth in demand for service, and the critical role such services now play in the efficiency and productivity of the nation's economy." The number of CMRS subscribers has grown considerably in recent years. **As** of December 2001, the Commission estimated that the sector had 128.5 million subscribers,[14] or a nationwide penetration rate of roughly 45 percent." CTIA's estimate for year-end 2001 was 128.4 million subscribers, a 17-percent increase over its estimate of 109.5 million subscribers for December 2000,[16] and a 132-percent increase over its estimate of 55.3 million total subscribers for December 1997.[17]

6. Subscribers of advanced wireless services have also continued to grow exponentially. Estimates of the number of mobile Internet users at the end of 2001 range from approximately 8 to 10 million, up from 2 to 2.5 million at the end of 2000.[18] **As** of March 2002, **four** nationwide mobile telephone operators were offering mobile Internet access at speeds generally ranging from 25-60 kilobits per second ("kbps"), with maximum bursting rates up to 144 kbps for at least one carrier, in some portion of U.S. counties covering approximately 181 million people." Analysts predict that wireless data traffic volume will overtake wireless voice traffic by 2006.[20]

7. Internationally, mobile telephone carriers outside of the U.S. have begun to deploy next generation mobile data services, notably the launch of 3G service using WCDMA technology by NTT DoCoMo in Japan in October 2001. DoCoMo's 3G service allows users to access the Internet at speeds of up to 384 kbps, transmit and download video clips, and send large data files quickly.[21] In addition,

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[12] The current CMRS era in the United States began with the allocation of 40 meganertz of spectrum for the Cellular Radio Service in 1981 (subsequently increased to 50 megahertz). ***See*** An Inquiry into the Use of the Bands 825-845 MHz and 870-890MHz for Cellular Communications Systems; and Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems, CC Docket No. 79-318, ***Report and Order,*** 86 FCC 2d 469 (1982). It continued a decade later with an additional 120 megahertz of spectrum for the Broadband Personal Communications Service. ***See*** Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, ***Second Report and Order, 8*** FCC Rcd 7700 (1993) ***(PCS Second Report and Order).***

[13] ***See AWS Allocation Order,*** ¶ 12.

[14] ***See*** FCC, Wireline Competition Bureau, Industry Analysis and Technology Division. ***Numbering Resource Utilization in the United States as of December 31, 2001***, at Table 1 (Aug. 1, 2002) (available at <http:Nwww.fcc.gov/wcb/tapd/numbering>).

[15] The nationwide penetration rate is calculated by dividing total mobile telephone subscribers by the total U.S. population. According to the Bureau of the Census, the combined population of the 50 states. the District of Columbia, and Puerto Rico as of July 1,2001 was estimated to be 288.6 million. ***See*** **U.S.** Census Bureau, ***Population Estimates*** (visited Nov. 6, 2002) **<http:lleire.census.govipopest/estimates.php>.**

[16] *See* Annual Repon and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, ***Seventh Report.*** 17 FCC Rcd 12985, 13087 App. C, Table 1 (2002) ***(Seventh Competition Report).***

[17] ***Id.***

[18] ***Id.*** at 13038.

[19] ***Id.*** at 13038-39.

[20] Olga Kharif, ***The Wireless Industry's Spectrum Shortage,*** BUSINESS WEEK ONLINE, Oct. 24,2001.

[21] NTT DoCoMo, ***Revolutionary 3G Service*** (visited Nov. ***6,*** 2002) <http:llwww.nndocomo.com/top.hrml>; Ken Wieland, *Lessons from* ***Japan: NTT DoCoMo Has Wisely Adopted a Step-by-step Approach to Service Provisioning,*** TELECOMMUNICATIONS (INTERNATIONAL EDITION), Feb. 1,2002, at 16.

carriers in many countries are currently offering service using advanced wireless technologies. For example, GPRS service is available in most of western Europe," while SK Telecom Company has launched cdma2000 1X service in South Korea."

8. The unique American challenge has been to find sufficient spectrum to meet this need, given the intensive use existing users already make of suitable portions of the radiofrequency spectrum, including those bands identified by the ITU. In short, suitable underutilized spectrum is not readily accessible, and the allocation process involves balancing the costs of disruptions to existing users against the benefits of the new allocations. The Commission's allocation proceeding was only one element of a much broader effort that involved many parties concerned with this spectrum, including the National Telecommunications and Information Administration (NTIA) (responsible for administering the Federal Government's use of spectrum), the Department of Defense (a major user of Government spectrum), and numerous representatives of non-Government spectrum users.[24] The Commission's proceeding began with a *Notice* of ***Proposed Rule Making and Order,*** adopted in December 2000.[25] In August 2001 the Commission sought comment on additional spectrum options.[26] This effort has led to the availability of 90 megahertz of spectrum for AWS, as provided in the ***AWS Allocafion Order*** adopted concurrently.

9. Not surprisingly, given the existing spectrum congestion, these frequency blocks present some challenges in terms of protection against interference from and *to* both adjacent spectrum users and Government incumbents that will remain in these bands. We now turn to consideration of service rules to maximize use of this spectrum.

III. DISCUSSION

A. In General

1. Flexible Use; Regulatory Framework; Assignment of Licenses

10. Flexible Use. Recognizing the potential benefits of flexible spectrum allocations, Congress amended the Communications Act in 1999 to give the Commission authority to allocate electromagnetic spectrum for flexibility of use if: "(1) such use is consistent with international agreements to which the United States is a party; and (2) the Commission finds that, after notice and an oppcrtunity for public comment, that (A) such an allocation would be in the public interest; (B) such use would not deter investment in communications services and systems, or technology development; and (C) such use would not result in harmful interference among users."[27] Since then, the Commission has identified the

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[22] S. Parker, ***Europe Sidelines UMTS in Favor of UMTS Focus,*** GLOBAL WIRELESS, Feb. 15, 2002, at 1.

[21] SK Telecom, ***1st Quarter Earningsfor the Period Ending March 31,*** 2002, May 6, 2002, at 9.

[24] ***See*** **An** Assessment of the Viability of Accommodating Advanced Mobile Wireless (3G) Systems in the 1710-1770MHz and 21 10-2170MHz Bands, U.S. Department of Commerce, NTIA (July 22,2002) ***(NTIA AWS Assessment).*** This report is available on the Internet at <http://www.ntia.doc.gov/ntiahome/threeg/va7222002/3Gva072202web.htm>

[25] Amendment of Part 2 **of** the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No, 00-258, ***Notice of Proposed Rule Making and Order,*** 16 FCC Rcd 596 (2001) ***(AWS Allocation NPRM).***

[26] Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless System, ET Docket No. 00-258, ***Memorandum Opinion and Order and Further Notice of Proposed Rulemaking,*** 15 FCC Rcd 16043 (2001) ***(AWS Allocation Further NPRM).***

[27] Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997) (BBA-97); 47 U.S.C. § 303(y).

establishment of maximum feasible flexibility in both allocations and service rules as a critical means of ensuring that spectrum is put to its most beneficial use. Thus, in a 1999 *Policy Statement* on spectrum management, the Commission observed that "[i]n the majority of cases, efficient spectrum markets will lead to use of spectrum for the highest value end use," and that "[f]lexible allocations may result in more efficient spectrum markets."[28]

11. We believe that our proposal to permit flexible use would eliminate uncertainties about the outcome of the competitive bidding process and promote our goals of assigning licenses expeditiously and promoting the intensive and efficient use of this spectrum.[29] As we noted in the *Lower 700 MHz Reconsideration Order*,[30] the adoption of flexible use service rules does not render all bidders eligible to participate." Here, as in the 700 MHz proceeding, adoption of the flexible use proposal would allow the spectrum to be employed for a full range of allocated services.[32] Further, it is consistent with our obligation to auction the majority of the AWS bands through competitive bidding."

12. The decisions adopted in the *AWS Allocation Order* permit fixed and mobile services in the 1710-1755 MHz and 2110-2155 MHz bands." In order to promote innovative services and encourage the flexible and efficient use of this spectrum, we tentatively conclude that our service rules for these bands should permit a licensee to use this spectrum for any use permitted by the United States Table of Frequency Allocations contained in Part 2 of our rules (*i.e.*, fixed or mobile services). We seek comment on whether permitting flexible use of this spectrum would meet the criteria specified in section 303(y)(2), and if so, the degree of flexibility that should be afforded licensees using this spectrum. We seek to develop a record to help quantify any trade-offs between flexibility and investment in technology and new services, to assist us in structuring rules that will avoid deterring investment in new technology and communications services in these bands. We therefore seek comment regarding the extent to which significant flexibility in service rules may encourage such investments in these bands. To the extent commenters believe flexibility will deter investment in these bands, they should also suggest specific restrictions on how spectrum should be used by a licensee, and provide detailed analysis of the economic tradeoffs between flexibility and investment that justify any particular recommended use restriction. We

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[28] *Spectrum Policy Statement*, 14 FCC Rcd at 19870 ¶ 9.

[29] *See* Reallocation and Service Rules for the 698-746 MHz Spectrum Band, GN Docket No. 01-74, *Memorandum Opinion and Order*, 17 FCC Rcd 11613, 11629 ¶ 39 (2002) (*Lower 700 MHz Reconsideration Order*).

[30] *Id.* at 11627-29 ¶¶ 35-39 (allocation of the band for flexible use by fixed, mobile and broadcast services did not implicate the public safety radio services exemption found at section 309(j)(2)(A)).

[31] Section 309(j)(2) exempts from auctions licenses and construction permits for public safety radio services, digital television service licenses and permits given to existing terrestrial broadcast licensees to replace their analog television service licenses, and licenses and construction permits for noncommercial educational broadcast stations and public broadcast stations described in section 397(6) of the Communications Act. Section 647 of the Open-Market Reorganization for the Betterment of International Telecommunications Act prohibits the Commission from employing competitive bidding to assign spectrum or orbital locations used for the provision of international or global satellite communications services. Pub. L. No. 106-180, 114 Stat. 48 § 647. In this instance, because there is no broadcast or satellite allocation, the noncommercial educational broadcast station and Orbit Act exemptions are plainly inapplicable. Similarly, because we are not proposing to designate the AWS bands as public safety radio service spectrum the public safety radio services exemption should also not apply.

[32] *See supra* n.4

[13] Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251, § 3002 (uncodified, reproduced at 47 U.S.C. § 309(j) note 3).

[34] *AWS Allocation Order*, ¶¶ 25, 30, 34, 40.

also specifically seek public comment on types of uses that pose the greatest risk of interference to uses planned by parties interested in using this spectrum.[35]

13. Regulatory Framework. Given that we propose to permit flexible use of these bands, we propose to do so under the regulatory framework of Part 27 of our rules, by creating a subpart for 1710-1755 MHz and 2110-2155 MHz. Part 27 was established for the 2305-2320 MHz and 2345-2360 MHz bands,[36] and has since been applied to the Upper and Lower 700 MHz bands." Part 27 differs from rule parts applicable to more traditional services in that it does not set out to provide a comprehensive set of licensing and operating rules for the spectrum licensed under it. Instead, for each frequency band under its umbrella, Part 27 defines permissible uses and any limitations thereon, sets out technical limitations necessary to prevent cognizable interference, and specifies basic licensing requirements. Licensees of Part 27 spectrum must look to other parts of the Commission's rules for other applicable licensing and operating rules (to the extent they do not conflict with the specific provisions of Part 27), depending on the particular services they actually offer." We seek comment on this Part 27 proposal generally, and as set out in more detail below, we also seek comment on what additional rule provisions should be included in Part 27 or incorporated by reference, in light of the services that may be offered under a flexible use approach.[39]

14. Alternatively, it may be preferable to govern services in these bands by our Part 24 or Part 22 rules, since the dominant use of this spectrum is likely to be advanced wireless services or next generation cellular and PCS services. The Part 24 rules address Personal Communications Services (PCS); the Part 22 rules apply to the Public Mobile Services, including in subpart H the Cellular Radiotelephone Service. Parts 24 and 22 are similar in many respects to our Part 27 rules, but are tailored to the specific types of services permitted. We seek comment on whether the 1710-1755 MHz and 2110-2155 MHz bands should be governed by Part 24 or Part 22, or by some other existing part of our rules. Commenters supporting this option should specify how the rule part they advocate would need to be modified to accommodate the range of services that are consistent with the allocations for these bands, and explain how this option would facilitate flexible use better than application of Part 27. Alternatively, we seek comment on whether services in these bands should be governed by their own newly created rule part, and if so, how such a new part would differ from Part 27.24 or 22.

15. Assignment of Licenses. Section 3002 of the Balanced Budget Act of 1997 requires the Commission to assign certain spectrum, including the majority of the AWS bands, through competitive bidding.[40] We recognize, however, that one portion of the AWS bands — 2150-2155 MHz — is not subject to such a specific directive to assign by competitive bidding. Rather it is only subject to the general section 309(j) requirement that the Commission assign licenses through the use of competitive bidding when mutually exclusive applications for initial licenses are accepted for filing, unless certain specific statutory exemptions apply.[41] Nonetheless, we tentatively conclude that it serves the public interest to assign licenses for all portions of the AWS bands by the same mechanism. Accordingly, assuming we adopt a licensing scheme that permits the filing of mutually exclusive applications, consistent with both

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[35] In ¶¶ 55-71, below, we seek comment on appropriate technical rules for use of this spectrum.

[36] Amendment of the Commission's Rules to **Establish** Pan 27, the Wireless Communications Service (WCS), GN Docket No. 96-228, ***Reporr and Order,*** 12 FCC Rcd 10785 (1997) ***(Parr 27 Reporr and Order).***

[37] *See* 47 C.F.R. § 27.5(b)

[38] *See* 47 C.F.R. § 27.3.

[39] *See infra* ¶¶ 52-53, 70.

[40] Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251. § 3002(b), (c)(1)(D), (c)(3).

[41] 47 U.S.C. § 309(j)(1), (2). In paragraph 11 and note 31 above, we explain that the section 309(j)(2) exemptions are not applicable here.

statutory obligations we propose to resolve such applications for AWS licenses through competitive bidding.[42] Our recommendations here with respect to all portions of the AWS bands are informed by our obligations under both section 3002 of the Balanced Budget Act of 1997[43] and section 3096) of the Communications Act." We seek comment. however. on other approaches to assign licenses that include the 2150-2155 MHz portion of the AWS bands. In suggesting other approaches, commenters are requested to use the analytical framework established in the *BBA* ***Reporr and Order*** regarding the Commission's exercise of its 309(j) auction authority.[45]

2. Geographic Area Licensing; Size **of** Geographic Areas; Service **to** Tribal **Lands**

16. Geographic Area Licensing. In this Notice we propose to adopt a geographic area licensing scheme—in contrast to station-defined (*i.e.*, site-by-site) licensing—for the 1710-1755 MHz and 2110-2155 MHz bands. As set out in more detail below, we seek comment on appropriate geographic licensing areas for these bands, and how such a licensing scheme can promote the objectives of Section 309(j)(3), including promotion of economic opportunities and competition by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and minority- and women-owned applicants.[46]

17. Our experience has been that geographic area licensing offers many advantages over site-by-site licensing. It affords licensees substantial flexibility to respond to market demand, and this results in significant improvements in spectrum utilization. In particular, geographic area licensing permits economies of scale because it allows licensees to coordinate usage across an entire geographic area to maximize the use of spectrum. It also reduces regulatory burdens and transaction costs, because licensees do not require site-by-site approval and can aggregate their service territories without incurring the administrative costs and delays associated with site-by-site licensing. This is especially advantageous where spectrum is likely to be used for services that require ubiquity and mobility over wide areas. As a result, licensees can more rapidly roll out their services, which was our experience with PCS. Further, a geographic licensing scheme also serves our public interest goals to promote "economic opportunity and competition . . . by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women."[47]

18. As noted above, section 3002 of the Balanced Budget Act of 1997 requires the Commission to assign licenses for the majority of the AWS bands through competitive bidding."' A geographic licensing scheme is likely to result in the acceptance of mutually exclusive license applications, which under section 309(j) must be assigned through competitive bidding. Accordingly, a geographic area licensing scheme would serve the Commission's statutory obligation to assign licenses for the majority of these bands through competitive bidding. We therefore seek comment on our proposal to adopt a geographic area licensing scheme for the AWS bands.

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[42] 47 U.S.C. § 309(j). Under this proposal, an auction of initial licenses in the AWS bands would be conducted in conformity with our general competitive bidding rules set forth in Pan 1, Subpart Q. ***See infra*** ¶ 73.

[41] Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251; ***see*** Implementation of Sections 309(j) and 337 of the Communications Act **of** 1934 **as** Amended, WT Docket No. 99-87, ***Reporr and Order and Further Notice ofproposed Rule Making,*** 15 FCC Rcd 22709 (1999) *(BBA* ***Report and*** *Order).*

[44] 47 U.S.C. § 309(j)(3)(A)-(E), 309(j)(4).

[45] *See BBA Report and Order*, 15 FCC Rcd at 22717-35 ¶¶ 18-50.

[46] 47 U.S.C. § 309(j)(3).

[47] **47** U.S.C. § 309(j)(3)(B).

[48] *See supra* ¶ 15.

19. Size of Geographic Areas. Assuming that we utilize a geographic area approach for licensing these bands, we must determine the appropriate size(s) of service areas on which licenses should be based. Traditionally, in establishing a service the Commission attempts to adopt optimal spectrum block size(s) and optimal geographic area size(s), while at the same time allowing panies to aggregate initial licenses and then adjust their licenses through secondary market mechanisms such as partitioning and disaggregation, if such fine-tuning is necessary.

20. Ideally, the size(s) of the initial geographic license areas would match the business plans of the initial licensees. Our approach to determining optimum size(s) attempts to accommodate the likely range of applicant desires by balancing efficiency with the policy goal of disseminating licenses among a wide variety of applicants.[49] We also wish to foster service to rural areas" and tribal lands,[51] and to promote investment in and rapid deployment of new technologies and services.[52] Large license areas may be preferred by incumbent providers to facilitate build-out of existing large-area systems. Large license areas also provide camers with greater flexibility in the build-out of their services, since they are less constrained by geographical license limits and entail coordination with fewer adjacent service providers. In this regard, we seek comment on whether any problems associated with the operations of other service providers rnay he better addressed by licensing this spectrum in 'arger areas where there may be less of a need for complicated protection agreements. *On* the other hand, small license areas may favor smaller entities with regional business plans and no interest in providing large-area service. Rural and smaller carriers may prefer licensing based on small geographic areas.[53]

21. We note that our simultaneous multiple round and combinatorial (or "package") auction designs generally may offer bidders the opportunity to aggregate smaller regional licenses to cover larger geographic areas, to aggregate smaller spectrum blocks, and to pair unpaired spectrum.[54] Such aggregation at auction of smaller spectrum blocks and licenses may provide bidders with greater flexibility to implement their business plans, as compared with the traditional approach of defining optimal size. Thus, in discussing the issues of spectrum block size, geographic area, and pairing of spectrum, cornenters are requested to take into consideration the various auction designs available to the Wireless Telecommunications Bureau. For example, if a commenter advocates a nationwide geographic area license, the commenter may also wish to comment on whether the auction of smaller licenses would allow bidders to aggregate licenses to create a nationwide footprint. Commenters should also discuss whether a particular band plan serves the Commission's spectrum management goals, including flexible

[49] *See* 47 U.S.C. § 309(j)(3)(B), (4)(C).

[50] *See* 47 U.S.C. § 309(j)(3)(A).

[51] *See infra* ¶ 25.

[52] *See* 47 U.S.C. § 309(j)(4)(C)(iii).

[53] *See, e.g.,* Service Rules for the 746-164 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, *First Report and Order,* 15 FCC Rcd 476,499 ¶ 55 (2000) *(Upper 700 MHz First Report and Order).*

[54] Package bidding may take many forms Under the design that the Wireless Telecommunications Bureau has developed for the 700 MHz band auction (Auction No. 31), bidders are not restricted to placing bids on individual licenses, but may also place all-or-nothing bids on packages of licenses. Auction of Licenses in the 747-762 and 777-792 MHz Bands Scheduled for September 6, 2000; Procedures Implementing Package Bidding For Auction No 31, *Public Norice,* 15 FCC Rcd 11526 (2000) (describing package bidding procedures); *see also* Auction of Licenses on the 747-762 and 777-792 MHz Bands Scheduled for June 19, 2002, Round Results Process and Results Replication, *Public Notice,* 17 FCC Rcd 8128 (2002). Under this approach, for example, a bidder desiring to inaugurate a nationwide service could bid on a package of licenses that covers the entire nation, and not face the risk of winning only some of the desired licenses and paymg more than the bidder values those licenses by themselves (without the other licenses needed to provide nationwide coverage).

and efficient spectrum use.[55] We are also aware that some licensees may need smaller service areas, since the most desirable or efficient scale of service area may vary according to the business plan of the potential licensee, in light of the variety of potential services that we envision will use these bands, including emerging technologies or next-generation applications. Thus, in discussing these issues, commenters should also take into consideration the possibility that we would permit post-auction partitioning of licenses for bidders whose business plans require different size geographic areas than we ultimately adopt.[56]

22. In the past the Commission has licensed spectrum utilizing a wide variety of geographic licensing areas, including nationwide licensing, regional licensing, local licensing, or some combination of these approaches:

[55] *See 47* U.S.C. § 309(j)(3)(D).

[56] *See infra* ¶¶ 50-51.

Number of Licenses	Description of areas	Examples
1	Nationwide	Narrowband PCS[57] 1 6 GHz band[58]
5	Narrowband PCS Regional	Narrowband PCS[59]
6	Economic Area Groupings (EAG)	220 MHz[60] Blocks A/B/D/E, Lower 700 MHz[61]
12	Regional Economic Area Groupings (REAG)	Wireless Communication Service (WCS)[62]
51	(see note below)	A & B-Block PCS[63]
51 or 52	Major Economic Areas (MEA)	WCS[64] 9291931 MHz Paging[65]
		800 MHz SMR[67] Paging[68]
493	(see note below)	C/D/E/F-Block PCS[69]
734	306 Metropolitan Statistical Areas (MSA) plus 428 Rural Service Areas (RSA)	Cellular[70] Block C, Lower 700 MHz[71]

23. We seek comment on these and other possible approaches as applied to the 1710-1755 MHz and 2110-2155 MHz bands. As indicated in the chart above, options include:

- ***Licensing these bunds on a nationwide basis***. Nationwide licensing provides the maximum

[57] ***See*** 47 C.F.R. § 24.102(a)

[58] ***See*** 47 C.F.R. § 27.6(f).

[59] ***See*** 47 C.F.R. § 24.102(b).

[60] ***See*** 47 C.F.R. §§ 90.7, 90.761(b).

[61] ***See*** 47 C.F.R. § 27.6(c)(1).

[62] ***See*** 47 C.F.R. § 27.6(a).

[63] ***See*** 47 C.F.R. § 24.202(a). These 51 areas were used under licenses issued by Rand McNally & Company for certain specific radio services, not including advanced wireless services, and are therefore not available for consideration in this proceeding. ***See*** Copyright Liabilities, ***Public Norice,*** 11 FCC Rcd 22429 (Mass Media Bur., 1996).

[64] ***See*** 47 C.F.R. § 27.6(a). WCS MEA number 52 consists of the Gulf of Mexico.

[65] ***See*** 47 C.F.R. § 22.503(b)(2), (3). The 51 paging MEAs do not include the Gulf of Mexico.

[66] ***See*** 47 C.F.R. §§ 90.7, 90.761(a)

[67] See47C.F.R. §§ 90.7, 90.681.

[68] See 47 C.F.R. § 22.503(b)(2), (3).

[69] ***See*** 47 C.F.R. § 24.202(b). These 493 areas were used under licenses issued by Rand McNally & Company for certain specific radio services, not including advanced wireless services, and are therefore not available for consideration in this proceeding. ***See*** Copyright Liabilities, ***Public Notice,*** 11 FCC Rcd 22429 (Mass Media Bur., 1996).

[70] ***See*** 47 C.F.R. § 22.909.

[71] ***See*** 47 C.F.R. § 27.6(c)(2).

advantages of large-area licenses, and it may disadvantage applicants interested in limited service areas. We seek comment on the extent to which nationwide licenses maximize the opportunity to provide the widest array of services and business plans. We also seek comment on whether nationwide licensing provides the necessary incentives for fostering the growth of existing technologies while encouraging the development of new applications. In addition, we **seek** comment on whether the adoption of nationwide licensing provides potential savings to the time and cost of developing applications and manufacturing equipment to operate in the spectrum at issue in this proceeding.

- *Licensing these bands using large, regional licenses.* We could license these bands using the six large, regional Economic Area Groupings (EAGs), the twelve slightly smaller Regional Economic Areas (REAs), or the 52 Major Economic Areas (MEAs). While we are aware of interest in nationwide and small-area licenses, we seek comment on whether there is any demand for regional licenses. If we choose to license this spectrum using regional licenses, we seek comment on whether we should use EAGs, REAs, MEAs, or alternatively some other large regional licensing area. We also seek comment on whether the opportunity to aggregate regional licenses would be sufficient for those seeking to build a nationwide footprint.

- *Licensing this spectrum, or a subset of this spectrum, using local area licenses.* Under this approach, the Commission could license this spectrum, or some part of this spectrum, using the MSAs, RSAs, or EAs and EA-like areas. We seek comment on whether local area licenses are preferable to nationwide or regional licenses, and if so which local area licensing scheme is preferable.

- *Licensing a portion of this spectrum using a nationwide or regional approach, and the remainingportion using smaller geographic areas.* Commenters supporting this approach should indicate which spectrum in these bands should be licensed on a nationwide or regional basis and which part should be licensed using small geographic areas. In addition, if commenters support licensing based on service areas other than those discussed above, they should discuss why other designations are more appropriate.

24. We also seek comment on including the Gulf of Mexico in our licensing scheme for these bands. We question whether to include it as part of larger service areas, as we did for the Upper 700 MHz Band, or whether we should separately license a service area or service areas to cover the Gulf of Mexico. Commenters who advocate a separate service area or areas to cover the Gulf of Mexico should discuss what boundaries should be used, and whether special interference protection criteria or performance requirements are necessary due to the unique radio propagation Characteristics and antenna siting challenges that exist for Gulf licensees.

25. Service to Tribal Lands. While we seek comment from the public in general concerning the matters set forth in this Notice, we specifically seek comment from Indian Tribal governments on the effect various geographic licensing options may have on the deployment of services to tribal lands, as well as the other issues raised herein. As detailed in the *Tribal Government Policy Statement*, the Commission is committed to (1) working with Indian tribes on a government-to-government basis to ensure that Indian tribes have adequate access to communications services, and (2) consulting with Tribal governments prior to implementing any regulatory action or policy that will significantly affect Tribal governments, their land, and resources.[12] We believe the matters set forth in this Notice have the potential to foster the development and, ultimately, the deployment of new technologies and services to

[12] ***See*** Statement of Policy on Establishing a Government-to-Government Relationship **with** Indian Tribes, ***Policy Statement,*** 16 FCC Rcd **4078** ***(2000)*** (***Tribal Government Policy Statement).***

many communities, including tribal communities. In keeping with the principles of the *Tribal Government Policy Statement,* we welcome the opportunity to consult with Tribal governments on the issues raised by this Notice, and we seek comment from both Tribal governments and other interested parties on the potential for the spectrum considerations set forth herein to serve the communications needs of tribal communities.

3. Spectrum Blocks and Pairing

26. In addition to seelung comment on the appropriate geographic licensing area or areas to be used to license spectrum in the 1710-1755 MHz and 2110-2155 MHz bands, we also seek comment on the amount of spectrum that should be included in each license, and the related issue of whether this spectrum should be paired. The Commission's first-generation cellular rules provide for two licenses of 25 megahertz each, with each license broken down into two paired 12.5-megahertz blocks." For second-generation PCS services, the Commission's rules provide for six licenses. Three of these licenses were initially for 30 megahertz of spectrum each, with each 30-megahertz license broken down into two paired 15 megahertz blocks, and the three other licenses were for 10 megahertz of spectrum each, with each 10 megahertz spectrum block broken down into two paired blocks of five megahertz of spectrum.[74] In the Upper 700 MHz proceeding, we configured the 30 megahertz of spectrum in two paired bands: a 10-megahertz band and a 20-megahertz band.[75]

27. With respect to spectrum block size, we could specify either equal-size blocks or varied size blocks. If we specify equal-size spectrum blocks, there are a number of block possibilities. For example, for each geographic licensing area, we could offer *two* licenses of 45 megahertz each, three licenses of 30 megahertz each, four licenses for 22.5 megahertz each, or five licenses for 18 megahertz. **As** with different size geographic areas discussed above, large spectrum blocks would seem to be more attractive for large entities, and for new entrants seelung to compete with established large entities. We seek comment on whether **we** should license the 1710-1755 MHz and 2110-2155 MHz bands using equal-size spectrum blocks and, if we do, what would be the appropriate size of the spectrum blocks.

28. Alternatively, we could license this spectrum using vaned block sizes. Under this approach, for each geographic licensing area, we could for example specify two licenses of 25 megahertz each, another for 20 megahertz, and **two** of 10 megahertz. One reason for licensing this spectrum in different block sizes is that licensees who planned to use smaller blocks of spectrum would not be required **to** acquire more spechum than they need for their operations. This approach could save time and resources, and also could expedite the development and offering of services. We seek comment on whether this spectrum should be licensed using varied sized spectrum blocks and, if so, what the appropriate block sizes would be. We also request comment on how various public objectives, such as the diversity of services offered to consumers, the adequacy of spectrum for flexible uses, the time necessary to implement the grants, and the ability of small businesses to provide niche services, could be achieved with a licensing scheme that uses blocks of different sizes.

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[73] See 47 C.F.R. § 22.905

[74] See 47 C.F.R. § 24.229. ***Bur see*** Amendment of the Commission'sRules Regarding Installment Payment Financing **for** Personal Communications Services (PCS) Licenses, WT Docket No. 97-82, ***Sixth Reporr and Order*** *and Order on Reconsideration*, 15 FCC Rcd 16266 (2000) (reconfiguring the 30-MHz C-block into three IO-MHz blocks).

[75] ***See Upper 700 MHz First Report and Order,*** 15 FCC Rcd at 493-94 ¶¶ 40-42; Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Pan 27 of the Commission's Rules, WT Docket No. 99-168, ***Memorandum Opinion and Order and Further Notice ofproposed Rulemaking,*** 15 FCC Rcd 20845, 20851 ¶ 12 *(2000).*

29. We also seek comment on the appropriate relationship between the geographic area of licenses and spectrum block size. For example, would a mix of different geographic license areas be best accompanied by different spectrum block sizes, presumably with larger geographic area licenses matched with larger frequency blocks, and smaller area licenses matched with smaller frequency blocks? This was the approach we took with PCS licensing, where we divided the country into 51 relatively large geographic areas for two 30-megahertz licenses, and 493 smaller areas for the remaining four licenses.[76] What are the advantages and disadvantages of such an approach?

30. In the *AWS Allocation Order*, we noted that most camers in the U.S. have indicated plans to provide service that meet the IMT-2000 data rates by deploying systems based on cdma2000 and W-CDMA technologies.[77] These technologies use paired channels of 1.25 to 7.5 MHz. We therefore seek comment on whether the ability of applicants to aggregate spectrum at auction[78] and then aggregate and disaggregate spectrum post-auction — both geographically and by frequency — suggest we should simply divide this spectrum into smaller frequency blocks (for example, five megahertz or even less) and let applicants assemble whatever spectrum they want? What are the advantages and disadvantages of such a "building block" approach? Commenters supporting this approach should state what size frequency blocks should be established, and whether it might be appropriate to establish block sizes smaller than the minimum necessary to provide efficient service (*i.e.*, such that an applicant would have to be top bidder on more than one block in a particular geographic area in order to receive a license at auction).

31. We also request comment on whether this spectrum should be licensed using paired **or** unpaired blocks, or a combination of paired and unpaired blocks. For instance, without regard to whether equal or varied spectrum block sizes are used to license this spectrum, the spectrum blocks could be broken down into two paired blocks. This licensing approach would provide each license with a separate transmit and receive channel and would, therefore, work with traditional wireless network architectures. While paired spectrum is ideal for operating modes such as frequency division duplex (FDD), it is unnecessary for one-way or time division duplex (TDD) communications. We therefore seek comment on whether the 1710-1755 MHz and 2110-2155 MHz bands should be licensed using paired or unpaired spectrum blocks, or a combination of paired and unpaired blocks. If the spectrum is licensed using paired spectrum blocks, we also request comment on whether the blocks should be symmetric or asymmetric in size. Furthermore, we request comment on the impact that our decisions on the size of spectrum blocks and service areas should have on our decision on whether to adopt paired or unpaired spectrum bands. For example, we seek comment on whether the adoption of smaller spectrum blocks would be more or less appropriate in a paired band structure than in an unpaired band structure.

32. In addition, given bidders' opportunities to aggregate licenses at auction, we seek comment on how the adoption of either a paired or unpaired band structure would impact the Commission's ability to achieve its spectrum management goals, including flexible and efficient spectrum use.[79] We request comment on the degree to which paired or unpaired bands are suited to new technologies, particularly such technologies that would enhance the offenng of advanced wireless telecommunications services. Comments should address the particular requirements of the various services and their technologies, including transmission modes such as FDD or TDD, that would use this spectrum, and the impact on such services and technologies of our adopting either a paired or unpaired band architecture.

[76] ***See*** 47 C.F.R. § **24.202.**

[77] ***See AWS Allocation Order,*** **¶ 19.**

[78] ***See supra*** **¶ 21.**

[79] ***See*** 47 U.S.C. § 309(j)(3)(D).

4. Band Clearance and Reimbursement

33. The transfer of the 1710-1750 MHz band from Federal Government use to non-Government commercial use **is** subject to the provisions of the National Telecommunications and Information Administration Organization Act,[80] as amended by the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (NDAA-99).[81] NDAA-99 requires new non-Government licensees to reimburse Federal users **for** their relocation costs.[82] Specifically, NDAA-99 provides that such Federal users shall notify the **NTIA** prior to auction of the "marginal costs anticipated to be associated with such relocation or with modifications necessary to accommodate prospective licensees."[83] NTIA **is** directed in turn to provide such cost information to the Commission so that the Commission may make such information available to potential auction applicants.[84] Significantly, the Federal user retains its primary status until relocation **is** complete and the **NTIA** limits or terminates the Federal user's operating license.[85] Finally, NDAA-99 also grants the Federal user a limited reclamation right.[86]

34. Pursuant to NDAA-99's direction, **NTIA** recently adopted rules governing the reimbursement process.[87] The ***NTIA Reimbursement Order,*** however, did not adopt cost-sharirg rules. Accordingly, **NTIA** contemplates issuing a further notice of proposed rulemaking to address the issue of cost sharing." The Commission **is** currently evaluating whether it **is** necessary to adopt any additional rules or

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[80] Pub. L. 102-538, 106 Stat. 3533 (1992).

[81] Pub. L. 105-261, 112 Stat. 1920 (1999), as codified at 47 U.S.C. § 923(g) (section 923(g)(1)(F) specifically notes that the 1710-1755 MHz band is subject to NDAA-99); ***see*** 47 C.F.R. § 301.10(a)(iii) (notes that the 1710-1755 MHz band is subject to the reimbursement rules promulgated by NTIA pursuant to NDAA-99).

[82] 47 U.S.C. § 923(g)(1)(A) ("[a]ny person on whose behalf a Federal entity incurs costs . . . shall compensate the Federal entity in advance for such costs. Such compensation may take the form of a cash payment or in-kind compensation."). **NTIA's** recent AWS viability assessment of the 1710-1770 MHz and 2110-2170 MHz bands provides a *summary* of the Federal incumbents in the 1710-1755 MHz band. ***NTIA AWS Assessment, supra*** note 24, at 1-2. We note that the Commission recently sought comment on the ***NTIA AWS Assessment.*** FCC Seeks Comment On The National Telecommunications and Information Administration's Report, ***An Assessment Of The Viability Of Accommodating Advanced Mobile Wireless (3G) Systems In The 1710-1770 MHz and 2110-2170 MHz Bands,*** ET Docket No. 00-258, ***Public Norice,*** 17 FCC Rcd 14390 (2002).

[83] 47 U.S.C. § 923(g)(1)(A). Previously, NTIA issued a report estimating the costs of relocation for Federal operations in the 1710-1755 MHz band to alternate frequency bands. NTIA's Special Publication 01-46, ***The Potential for Accommodating Third Generation Mobile Systems in the 1710-1850 MHz Band: Federal Operations, Relocation Costs. and Operationallmpacts - Final Reporr,*** at 5-1 – 5-13 (Mai. 2001) ***(NTIA AWS Report).*** **NTlA** has stated that the final cost estimates for the 1710-1755 MHz band may differ from prior estimates based upon the receipt of additional data. ***NTIA AWS Assessment, supra*** note 24, at 8.

[84] 47 U.S.C. § 923(g)(1)(A); 47 C.F.R. § 301.110 (NTIA shall provide the Federal entity's estimated marginal cost information to the Commission at least 180 days prior to the date on which the auction is scheduled to commence).

[85] 47 U.S.C. § 923(g)(2); *Mandatory* ***Reimbursement Rules for Frequency Band or Geographic Relocation of Federal Spectrum-Dependent Systems,*** Department of Commerce, National Telecommunications and Information Administration, 67 Fed. Reg. 41 182, 41184 ¶ 18 (June 17, 2002) ***(NTIA Reimbursement Order).*** We note that not all Federal incumbents in the 1710-1755 MHz band are required to relocate. Exempt entities, however, may voluntarily relocate and negotiate relocation costs in the same manner as non-exempt entities. *Id.* at 41186 ¶¶ 34-35; ***see also AWS Allocation NPRM,*** 16 FCC Rcd 596, 613 ¶ 40. 650-653 App. E and F (providing information regarding exempt entities).

[86] 47 U.S.C. § 923(g)(3).

[87] 47 U.S.C. § 923(g)(1)(A); ***NTlA Reimbursement Order,*** 67 Fed. Reg. at 41 186 ¶¶ 34-35.

[88] ***NTIA Reimbursement Order,*** 67 Fed. Reg. at 41187 ¶ 46.

procedures to supplement NTIA's reimbursement regulations.[89] Any such rulemaking will be part of a separate proceeding. We note, however, that NTIA has proposed legislation to change the reimbursement process by creating a relocation fund using auctions proceeds.[90]

35. As noted in the *AWS Allocation Order,* incumbents in the 2110-2150 MHz band who have primary status are entitled to compensation for relocation under policies based on the ***Emerging Technologies*** proceeding.[91] Specifically, these incumbents are entitled to compensation for relocation of any links that may pose an interference threat to new fixed or mobile system licensees. including all engineering, equipment, site, and Commission fees.[92] The Commission will consider relocation procedures for the 2150-2155 MHz band in a separate proceeding to be initiated in the near future.[93]

B. Licensing and Operating Rules

1. Regulatory Status

36. The Commission's current mobile service license application requires an applicant for mobile services to indicate whether the service it intends to offer will be CMRS, Private Mobile Radio Service (PMRS), or both,[94] since service offerings may bear on eligibility and other statutory and regulatory requirements.[95] The Commission has adopted a similar licensing framework for Part 27 of our Rules.[96] Thus, under Part 27, the Commission permits applicants to request common carrier status as well as non-common camer status for authorization in a single license, rather than to require the applicant to choose between common camer and non-common services.[97] Regardless of which rule part is used to license advanced wireless services in the 1710-1755 MHz and 21 10-2155 MHz bands, we propose to adopt this same approach. Licensees in these bands will be able to provide all allowable services anywhere within

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[89] We note that the FCC historically has dealt with the complex issues arising from cost sharing among licensees. ***See*** Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation, WT Docket No. **95-157,** ***First Report and Order and Further Notice of Proposed Rulernoking,*** 11 FCC Rcd **8825,8868 ¶ 88 (1996).**

[90] U.S. Department of Commerce, National Telecommunications and Information Administration, "Commerce Department Asks Congress to Create Spectrum Relocation Fund for Federal Agencies Whose Spectrum Is Reallocated to Commercial Use," NTIA Press Release, July **23, 2002** (available at <http://www.ntia.doc.gov/ntiahome/press/2002/relocationfund7242002.htm>). The pi-oposed legislation is available on the NTIA Web site at <http://www.ntia.doc.gov/ntiahome/congress/2002/legistransmittal7232002.htm>.

[91] ***AWS Allocation Order,*** ¶ **42;** ***AWS Allocation NPRM,*** 16 FCC Rcd at **618** ¶ 54 n. **102;** ***see also*** Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. **92-9,** ***First Reporr and Order and Third Notice of Proposed Rule Making,*** 7 FCC Rcd **6886** (1992).

[92] ***AWS Allocation Order,*** **¶¶ 42-46;** ***AWS Allocafion NPRM.*** 16 FCC Rcd at **618 ¶¶** 54-55.

[93] ***AWS Allocation Order,*** ¶ **41.**

[94] In the ***LMDS Second Reporr and Order,*** the Commission required applicants for fixed services to indicate if they planned to offer services as a common carrier. a non-common carrier, or both, and to notify the Commission of any changes in status without prior authorization. Rulemaking to Amend **Parts** 1, 2, 21, and **25** of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the **29.5-30.0** GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, CC Docket No. **92-297,** ***Second Report and Order, Order on Reconsideration, and Fifth Notice*** of *Proposed Rulemaking,* 12 FCC Rcd **12545, 12636-38 ¶¶ 205-208,** 12644-45 ¶¶ 225-226, **12652-53 ¶¶** 245-251 **(1997)** ***(LMDS Second Report and Order);*** *aff'd,* ***Melcher*** *v. FCC,* **134** F.3d 1143 (D.C. Cir. 1998).

[95] ***See.*** *e.g.*, foreign ownership requirements, discussed at ¶ **39,** below.

[96] ***See*** **47** C.F.R. **§ 27.10.**

[97] ***Parr*** **27** ***Report ond Order,*** **12** FCC Rcd at **10846** ¶ 119. **10848** ¶ 122

their licensed area at any time, consistent with their regulatory status. We believe that this approach is likely to achieve efficiencies in the licensing and administrative process.

37. We furtherpropose that applicants and licensees in the 1710-1755 MHz and 2110-2155 MHz bands be required to indicate a regulatory status based on any services they choose to provide. Apart from this designation of regulatory status, we would not require applicants to describe the services they seek to provide?' We wish to point out to potential applicants that an election to provide service on a common carrier basis requires that the elements of common carriage be present;[99] otherwise the applicant must choose non-common camer status.[100] If potential applicants are unsure of the nature of their services and their classification as common carrier services, they may submit a petition with their applications, *or* at any time, requesting clarification and including service descriptions for that purpose.[101]

38. We also propose that if a licensee were to change the service or services it offers, such that its regulatory status would change, the licensee must notify the Commission.'" A change in a licensee's regulatory status would not require prior Commission authorization, provided the licensee was in compliance with the foreign ownership requirements of section 310(b) of the Communications Act that apply as a result of the change."' We propose to require the notification within 30 days of a change made without prior Commission approval. We note, however, that a different time period may apply, as determined by the Commission, where the change results in the discontinuance, reduction, or impairment of the existing service.[104] In summary, no matter what **rule** part is used to license services in the 1710-1755 MHz and 2110-2155MHz bands, we propose that these licensees would be authorized to provide a variety or combination of fixed and mobile, common camer and non-common camer services. **We** seek comment on these proposals.

2. Ownership Restrictions

a. Foreign Ownership Reporting

39. Sections 310(a) and 310(b) of the Communications Act, as modified by the Telecommunications Act of 1996, impose foreign ownership and citizenship requirements that restrict the issuance of licenses to certain applicants.[105] *An* applicant requesting authorization for other than broadcast, common camer, or aeronautical en route or fixed services would be subject to section 310(a), but not to the additional prohibitions of section 310(b). *An* applicant requesting authorization for these particular services would be subject to both sections 310(a) and 310(b). **As** applicable to these bands, we do not believe that common camers and non-common carriers filing an application should be subject to

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[98] *See id.* at 108487121; *see also LMDS Second Report and Order,* 12 FCC Rcd at 12644 ¶ 223; 47 C.F.R. § 101.1013.

[99] ***See*** 47 U.S.C. § 153(44) ("A telecommunications carrier shall be treated **as** a common carrier under this Act ***...");seealso*** 47 U.S.C. § 332(C)(1)(A) ("A person engaged in the provision of a service that **is** a commercial mobile service shall, insofar **as** such person **is so** engaged, be treated as a common carrier for purposes **of** this Act ...").

[100] ***See*** Parr *27* Report and Order, 12 FCC Rcd at 10848 ¶¶ 121-22. The Commission examined services in the *LMDS* ***Second*** Reporr and Order and explained that any video programming service would be treated as a non-common carrier service. *LMDS* Second Report and Order, 12 FCC Rcd at 12639-41 ¶¶ 213-15.

[101] *Part 27 Report and Order,* 12 FCC Rcd at 10848 ¶ 121

[102] See47C.F.R. § 27.10(d). *See also* 47 C.F.R. § 27.66(a)-(b).

[103] 47 U.S.C. § 310(b); ***see*** *infra* ¶ 39.

[104] See 47 C.F.R. § 27.66(a)-(b)

[105] 47 U.S.C. § 310(a), (b)

vaned reporting obligations. By establishing parity in reporting obligations, however, we do not propose a single, substantive standard for compliance. For example, we do not and would not deny a license to **an** applicant requesting authorization exclusively to provide services not enumerated in section 310(b), solely because its foreign ownership would disqualify it from receiving a license if the applicant had applied for a license to provide the services enumerated in section 310(b). We request comment on this proposal.

b. Spectrum Aggregation Limits; Eligibility Restrictions

40. The Commission decided last year to "sunset" the CMRS spectrum aggregation limit, or "spectrum cap,"[106] effective January 1, 2003.[107] The Commission found that the cap, by setting an *a priori* limit on spectrum aggregation without looking at the particular circumstances of specific proposed transactions, was unnecessarily inflexible and could be preventing beneficial arrangements that promote efficiency without undermining competition. However, the Commission also stated that the Commission would continue to pursue the objectives of "discourag[ing] anticompetitive behsvior while at the same time maintaining incentives for innovation and efficiency,"[108] but would do so by performing case-by-case reviews of proposed CMRS spectrum transactions rather than by applying a prophylactic rule.[109] And, as most relevant here, the Commission found that "to the extent that the initial distribution of spectrum through auction is an issue in the future, that is also amenable to case-by-case review, in the sense that [the Commission] can shape the initial distribution through the service rules adopted with respect to specific auctions."[110]

41. Since the CMRS spectrum cap will be sunset shortly, applicants in the 1710-1755 MHz and 2110-2155 MHz bands will not be subject to any generalized limits on spectrum aggregation. We tentatively conclude that we need not adopt any band-specific service tules addressing spectrum aggregation limits applicable to the initial licensing of these bands, but consistent with the approach we have described in the ***Spectrum** Cup **Order,*** we seek comment on whether any such limits are necessary or appropriate. In particular, we seek comment on whether we should limit the amount of spectrum in these bands that any one entity (or related entities) may acquire at auction in the same geographic area. Commenters should provide economic data and analysis supporting their positions. Commenters who support adoption of such limits should also address with particularity what the limitations should be (including whether they should depend on factors such as the amount of CMRS spectrum an applicant holds in other bands), what competitive problems the proposed limits are designed to solve, and how their proposals will address these problems without imposing undue costs or inefficiencies.

42. In the initial licensing of some major new services, we have limited eligibility beyond what section 310 requires, in order to maximize competition by ensuring that at least some licenses go to new

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[106] ***See*** 47 C.F.R. § 20.6

[107] ***See*** 2000 Biennial Regulatory Review: Spectrum Aggregation Limits for Commercial Mobile Radio Services, WT Docket No. 01-14, ***Report and Order,*** 16 FCC Rcd 22668 (2001)(*Spectrum Cup* ***Order),recon. pending.***

[108] *Spectrum* ***Cap Order,*** 16 FCC Rcd at 22679 ¶ 26 n.71 (citing Implementation of Sections 3(n) and 332 of the Communications Act—Regulatory Treatment of Mobile Services, GN Docket No 93-252, ***Third Report and Order,*** 9 FCC Rcd 7988, 8105 ¶ 251 (1993)).

[109] "[I]n light of the growth of both competition and consumer demand in CMRS markets, we conclude that case-by-case review, accompanied by enforcement of sanctions in cases of misconduct, is now preferable to the spectrum cap rule because it gives the Commission flexibility to reach the appropriate decision in each case, on the **basis *of*** the particular circumstances of that case." ***Spectrum** Cup **Order,*** 16 FCC Rcd at 22693-94 ¶ 50.

[110] ***Id.*** at 22696 ¶ 54

entrants."' Given the current state of competition in the CMRS industry, we believe that such restnctions are not necessary for the 1710-1755 MHz and 21 10-2155 MHz bands. To the contrary, we believe opening these bands to as wide a range of applicants as possible would encourage entrepreneurial efforts 10 develop new technologies and services, while helping to ensure efficient use of this spectrum. We believe that this approach is consistent with our statutory mandates. We seek comment on these views. Should there be any set-asides for new entrants or other types of applicants? Should there be any restnctions barring entities (such as incumbent cellular or PCS providers) from acquiring licenses in these bands, other than the foreign ownership requirements set forth in section 310 of the Communications Act?[112] Are there potential licensees or classes of licensees whose use of these bands would undermine competition such that we should consider such restrictions?

3. License Term; Renewal Expectancy

43. The Communications Act imposes no term limit on licenses that will be issued by the Commission for this spectrum."' Generally, the Commission's rules provide for a 10-year license term for wireless licenses.[114] We propose that in the 1710-1755 MHz and 21 10-2155 MHz bands, the license term be 10 years, with a renewal expectancy similar to that afforded PCS, cellular, and Part 27 licensees. In the case of these licensees, a renewal applicant receives a preference or renewal expectancy if the applicant has provided substantial service during its past license term and has complied with the Communications Act and applicable Commission rules and policies.[115] We have defined substantial service as "service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal."[116] We believe that a IO-year license term. combined with a renewal expectancy, will help to provide a stable regulatory environment that will be attractive to investors, and thereby encourage development of these frequency bands. We srek comment on this proposal.

44. We also seek comment on whether a license term longer than 10 **years** is appropriate to achieve these goals and better serve the public interest. Commenters who favor a license term in excess of ten years should specify a reasonable license term and include a basis for the period proposed. In providing comments on this issue, commenters should consider whether a longer license term might be appropriate for band plans involving the 1710-1755 MHz band, given the Federal government's continued use of this band after 2004 or its operation of certain in-band facilities after that date."' Commenters should also address whether it would be possible to have different license terms, depending on the type of service offered by the licensee. We also seek comment on how we would administer such an approach, particularly if licensees provide more than one service in their service area, or decide to change the type of service they plan to offer.

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[111] For example, we limited eligibility for the PCS A and B blocks to entities that were not licensees of cellular systems in the same area. ***See PCS Second Reporr and Order, 8*** FCC Rcd at 7744-45 ¶ 105. In granting the Commission authority in section 309(j) *of* the Communications Act to auction wireless spectrum and to impose eligibility requirements as appropriate, Congress also directed the Commission to exercise that authority so as to "promot[e] . . . economic opportunity and competition." ***See*** 47 U.S.C. § 309(j)(3).

[112] ***See supra*** **¶ 39.**

[113] The only statutory limit on license terms is eight years for licenses in the broadcast services. ***See*** **47** U.S.C. § 307(c)(1); ***see also*** 47 C.F.R.§ 73.1020(a). The Table *of* Allocations does not permit broadcast use of the 1710-1755MHz or 2110-2155 MHz bands. ***Seesupra*** n.4.

[114] *E.g.*, 47 C.F.R. §§ 24.15, 27.13(a).

[115] ***See*** 47 **U.S.C.**§ 151 *et seq.*; 47 C.F.R. § 22.940(a)(1)(i) (cellular), § 24.16(a) (PCS), § 27.14 (WCS and 700 MHz).

[116] ***See.*** *e.g.*, 47 C.F.R. §§ *22.940(a)(1)(i), 24.16(a), 27.14(a).*

[117] ***See AWS Allocation Order,*** ¶¶ 22-25.

45. Under our proposal, in the event that a license in the subject bands is partitioned or disaggregated, any partihonee or disaggregatee would be authorized to hold its license for the remainder of the partitioner's or disaggregator's original license term, and would be eligible for a renewal expectancy on the same basis as other licensees. This approach is similar to the partitioning provisions the Commission adopted for MDS,[118] for the Upper 700 MHz licensees,"' and for broadband PCS licensees."' Specifically, we do not believe that a licensee, by partitioning or disaggregation, should be able to confer greater rights than it was awarded under the terms of its license grant. We seek comment on these proposals.

4. Performance Requirements

46. Section 309(j)(4)(B) of the Communications Act requires the Commission to include safeguards to protect the public interest in the use of the spectrum, and "performance requirements . . . to ensure prompt delivery of service to rural areas, to prevent stockpiling or warehousing of spectrum by licensees or permittees, and to promote investment in and rapid deployment of new technologies and services."[121] In addition, we seek to promote the efficient and effective use of the spectrum."' Moreover, we have encouraged licensees to build out not only in urban areas and areas of high density population but in rural areas as well, or to partition their licenses to allow others to do so.[123]

47. We seek comment on whether licensees in the 1710-1755 MHz and 21 10-2155 MHz bands should be subject to any performance requirements in addition to a substantial service requirement at license renewal. In some services, we have imposed minimum coverage requirements on licensees to ensure that spectrum is used effectively and service is implemented promptly; *e.g.*, broadband PCS licensees were required to reach a minimum of one-third of the population in their licensed areas no later than the mid-point of the license term, and two-thirds of the population by the end of the license term.[124] In other services we have identified specific coverage criteria as meeting a substantial service requirement, but have allowed licensees to make alternative showings of substantial service if they do not meet these criteria.[125] We seek comment on whether we should establish any specific coverage requirements in the 1710-1755 MHz and 21 10-2155 MHz bands, or whether coverage criteria should be adopted as one means, but not the exclusive means, of meeting a substantial service requirement. Under either approach, we seek comment on what level of coverage should be specified, and how a coverage requirement would apply given the range of permitted uses possible under our proposed flexible use policy. We also seek comment on whether licensees should be subject to interim performance requirements prior to the end of the license term.

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[118] ***See*** Amendment **of** Parts 21 and 74 **of** the Comnussion's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, MM Docket No. 94-131, ***Reporr and Order,*** 10 FCC Rcd 9589,9614¶ **46** (1995).

[119] ***See Upper 700 MHz First Reporr and Order,*** 15 FCC Rcd at 506-OX ¶¶ 73-78.

[120] ***See*** Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees and Implementation of Section 257 **of** the Communications Act — Elimination of Market Barriers, WT Docket No. 96-1148, ***Reporr and Order and Furrher Norice of Proposed Rulemaking.*** 11 FCC Rcd 21831.21870 ¶¶ 76-77 (1996).

[121] 47 U.S.C. § 309(j)(4)(B); ***see id.*** § 309(j)(3).

[122] ***See*** 47 U.S.C. § 309(j)(3)(D).

[123] ***See Upper*** 700 *MHz First* ***Reporr and Order,*** 15 FCC Rcd at 505 ¶ 70.

[124] 47 C.F.R. § 24.203.

[125] ***See.*** *e.g.*, 47 C.F.R. § 24.103 (narrowband PCS)

48. We also seek comment on whether, in the event that a license is partitioned or disaggregated. a partitionee or disaggregatee should be bound by the standard (either substantial service or a construction requirement) that we may adopt in this proceeding. Finally, we seek comment on whether an adjustment to either a substantial service requirement or a minimum coverage requirement must be made in order to account for the Federal government's continued use of the 1710-1755 MHz band until 2004, or its operation of certain in-band facilities after that date.[126]

49. If a licensee does not comply with the performance requirement we adopt, the Commission must consider what action to take. We propose to apply the procedures set forth in section 1.946(c) of the Commission's rules to licensees who fail to meet their performance requirements. This section states that "[i]f a licensee fails to commence service or operations by the expiration of its construction period or to meet its coverage *or* substantial service obligations by the expiration of its coverage period, its authorization terminates automatically, without specific Commission action, on the date the consmction or coverage period expires."[127] We seek comment on our proposal to apply this rule to licensees in the 1710-1755 MHz and 2110-2155 MHz bands. In addition, if a geographic area licensee loses its license for failure to comply with coverage requirements, we seek comment on whether the licensee should be prohibited from bidding on the geographic area license for the same temtory in the future.

5. Disaggregation and Partitioning of Spectrum

50. Geographic partitioning and spectrum disaggregation is a tool utilized by the Commission that is intended to promote efficient spectrum use and economic opportunity for a wide variety of applicants, including small business, rural telephone, minority-owned, and women-owned applicants."' We seek comment on allowing licensees in the 1710-1755 MHz and 2110-2155 MHz bands to partition their service areas and to disaggregate their spectrum.[129] We believe that sectior. 27.15 of the Commission's rules"' should apply if we allow partitioning and disaggregation. Section 27.15 provides that licensees may apply to partition their licensed geographic service areas or disaggregate their licensed spectrum at any time following the grant of their licenses,"' We seek comment on the benefits and costs of this approach, and whether it promotes the public interest. We note that in tne ***27 MHz Report and Order,*** we indicated that by the end of 2002, we plan to initiate a Notice of Inquiry that, among other things, will examine the effectiveness of our current regulatory tools. includiii,; partitioning and disaggregation, in facilitating delivery of wireless service to rural areas."'

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[126] ***See AWS Allocation Order,*** ¶¶ 22-23.

[127] 47 C.F.R. § 1.946(c).

[128] ***See*** 47 U.S.C. § 309(j)(4)(C).

[129] "Partitioning"is the assignment of geographic portions of a license along geopolitical or other boundaries. "Disaggregation" is the assignment of discrete portions of "blocks" of spectrum licensed to a geographic licensee or qualifying entity. Disaggregation allows for multiple transmitters in the same geographic area operated by different companies on adjacent frequencies (thus increasing the possibility of harmful interference).

[130] 47 C.F.R.§ 27.15. These rules apply to licensees in the 700 MHz bands and the 2.3 GHz band. ***See*** *also* Reallocation of the **216-220** MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands. WT Docket No. 02-08, ***Notice*** *of Proposed Rule* ***Making,*** 17 FCC Rcd 2500,2535 ¶¶ 89-90 (2002).

[131] ***See Part*** *27 Report and Order*, ***12 FCC*** Rcd at 10836-39¶¶ 96-103.

[132] ***See*** Amendments to Parts 1, 2, 27 and 90 of the Commission's Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675MHz, and 2385-2390 MHz Government Transfer Bands, WT Docket No. 02-8, ***Report and Order,*** 17 FCC Rcd 9980,9991¶ 18 (2002) ***(27 MHz Report and Order).***

51. In addition, pursuant to section 27.15, the partitioning licensee must include with its request a description of the partitioned service area and a calculation of the population of the partitioned service area and the licensed geographic service area.[133] Section 27.15 also contains provisions against unjust enrichment.[134] We propose to adopt these provisions, as well as the remaining provisions governing partitioning and disaggregation set forth in section 27.15, if we allow partitioning and disaggregation. We seek comment on our proposal.

6. Other Operating Requirements

52. As noted in paragraphs 13-14 above, even though licenses in the 1710-1755 MHz and 2110-2155 MHz bands may be issued pursuant to one rule part, licensees in these bands may be required to comply with rules contained in other parts of the Commission's rules by virtue of the particular services they provide. For example:

- Applicants and licensees will be subject to the application filing procedures for the Universal Licensing System, set forth in Part 1 of our rules.[135]
- To the extent a licensee provides a Commercial Mobile Radio Service (CMRS), such service would be subject to the provisions of Part 20 of the Commission's rules, along with the provisions in the rule part under which the license was issued.[136] Part 20 applies to all CMRS providers, even though the stations may be licensed under other parts of our rules.
- If a licensee provides a fixed service, there may be specific provisions in Part 101 of the Commission's rules[117] to which it should be subject, even though the licensee's stations would be licensed under another rule part.
- The application of general provisions of Parts 22, 24, 27, or 101 would include rules related to equal employment opportunity, 911 service, etc.

53. We seek comment generally on any provisions in existing, service-specific rules that may require specific recognition or adjustment to comport with the supervening application of another rule part, as well as any provisions that may be necessary in this other rule part to fully describe the scope of covered services and technologies. We seek comment on applying these rules to the spectrum that is the subject of this Notice, and specifically on any rules that would be affected by our proposal to apply elements of the framework of these parts, whether separately or in conjunction with other requirements.

C. Technical Rules

54. Our allocation decision for the 1710-1755 MHz and 2110-2155 MHz bands permits the range of uses in the Allocation Table, and in this Notice we propose to permit flexible use. A broad range of services and technologies may ultimately share this spectrum, including those that have not yet been developed, so we cannot have reliable information at this time on the technical parameters for all the services that will ultimately be provided. Despite this uncertainty, the nature of the services and technologies used can affect the potential for interference between licensees using ths same spectrum in adjacent service areas, or adjacent spectrum, so we must establish rules to maximize service and minimize

[133] 47 C.F.R. § 27.15(b)(1).

[134] 47 C.F.R. § 27.15(c)(1)(2); *see also* 47 C.F.R. § 1.2111

[135] *See* 47 C.F.R. Part 1, Subpart F.

[136] 47 C.F.R. Part 20; *see also* 47 C.F.R. § 27.3(g)

[117] 47 C.F.R. Part 101

interference. We are particularly interested in potential interference issues that would result from various Government and non-Government services operating in these bands.

1. **In-Band** Interference **Control**

55. Interference between AWS Users: Inter-Region. We have permitted flexibility in services and technologies in other frequency bands, such as the cellular service, PCS, ana WCS. In these cases, we generally have controlled co-channel interference between licensees in adjacent geographic regions by establishing power flux density or field strength limits at the edge of the service areas and by encouraging the licensees to informally coordinate their operations.[138] In other cases we have relied principally on more formal coordination procedures to avoid harmful interference between co-channel operations of licensees in adjacent service areas."[139]

56. We tentatively conclude that either a boundary limit or a coordination method, when properly applied, can provide a satisfactory means of controlling harmful interference or determining the interaction between systems, although there may be reasons to prefer one or the other for the 1710-1755 MHz and 2110-2155 MHz bands. For example, a general coordination requirement may be necessary when there is a lack of consensus regarding an appropriate limit.[140] **A** coordination approach could also minimize the potential for interference to coordinated facilities, but may impose unnecessary coordination costs for facilities with a low potential for interference and increase the potential for undesirable strategic or anti-competitive behavior. **A** boundary limit approach, on the other hand, may reduce the need for coordination by giving licensees the ability unilaterally to deploy facilities in boundary areas as long as the limit is met, but by itself may provide insufficient assurance against interference to such facilities. Even with a boundary limit, some degree of coordination and joint planning between bordering licensees appears likely to be needed to ensure efficient use across the boundary."[141]

57. We seek comment **on** whether we should adopt rules establishing a boundary limit to control co-channel interference in the 1710-1755 MHz and 2110-2155 MHz bands. We request comment on whether a boundary limit would reduce the need for coordination by giving licensees the ability unilaterally to deploy facilities in boundary areas as long as the limit is met. We also seek comment on whether a boundary limit by itself may provide insufficient assurance against interference between co-channel licensees. Even with a limit, would not some degree of coordination and joint planning between bordering licensees be needed to ensure efficient use across the boundary, to ensure no dead zones? Should we permit licensees in adjoining areas to agree to alternative power flux densities or field strengths at their common border? If we were to agree to such a procedure, whar would be the impact in terms of increased flexibility and harmful interference? To the extent coordination between adjacent licensees is likely to be needed, to what extent can we rely on purely voluntary procedures to reach efficient results? Would any rules or guidelines be beneficial in facilitating such coordination? Further, should we choose the boundary limit method, what should be the limit? For some other spectrum we

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[138] ***See, e.g.***, 47 C.F.R. §§ 24.236, 24.237 (broadband PCS). These provisions provide flexibility for licensees to employ other measures to limit or prevent interference , such as use of robust technologies, panitioning the use of frequencies, taking advantage of terrain shielding and other propagation effects, and use of directional antennas.

[139] *See, e.g.*, 41 C.F.R. § 27.55 (2305-2320, 746-764 and 776-794 MHz bands:, § 101.509 (24 GHz band).

[140] In the 39 GHz proceeding, for example, the Commission expressed concern about adopting a limit without such information. Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, ET Docket No. 95-183, ***Report and Order and Second Norice of Proposed Rule Making,*** 12 FCC Rcd 18600, 18633¶ 68 (1997). ***See also LMDS Second Reporr and Order,*** 12 FCC Rcd at 12663 ¶ 278.

[141] ***See.*** *e.g.*, 47 C.F.R. § 22.907 (cellular) and § 24.237 (broadband PCS).

have established limits of 40 dBμV/m or 47 dBμV/m.[142] Given the mix of services expected for this spechum, what value is reasonable: either of these values, or some other value?

58. We also seek comment on whether we should adopt a coordination requirement instead of a boundary limit to control co-channel interference in these bands. In the event we decide to use a coordination requirement, how far from the boundary should the coordination zone be located, and how would it be affected by power limits we might adopt? Comments are requested on whether specific aspects of coordination procedures should apply, such as those contained in section 22.150 or 101.103 of our rules,[143] or, alternatively, whether a general requirement such as the cellular rule[144] should apply. Our objective is to ensure that licensees receive protection from harmful interference with the minimum regulation necessary. Would a general coordination requirement minimize the potential for interference or impose unnecessary coordination for facilities with a low potential for interference under either approach?

59. Commenters should provide an analysis of the advantages and disadvantages of the boundary limit and coordination approaches, or approaches that combine features of both. We seek comment, for example, on whether anti-competitive behavior could result from our adoption of either approach. Moreover, how do the two methodologies compare in terms of their effect on licensee costs? The comments should address these questions in the context of whether one inethod or the other would enable licensees to deploy their facilities effectively, while minimizing interference to co-channel licensees in adjacent geographic areas.

60. Interference between AWS Users: Inter-Block. For WCS we also require licensees to attenuate the power below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ watts at the edges of their blocks, except for commonly held channel blocks, which require no attenuation. This level of attenuation is commonly employed in other services, and has been found adequate to prevent adjacent channel interference as a general matter.[145] We seek comment on whether such additional technical limits are needed between adjacent channel blocks in order to facilitate coordination between licensees.

61. Interference with Incumbents. Regarding the 2110-2155 MHz band, under the ***Emerging Technologies*** relocation procedures, incumbent fixed point-to-point links will be moved on an as-needed basis. Thus it is likely that some fixed links may remain in the band even while advanced wireless systems become operational. Interference guidelines need to be developed for this situation. We ask whether the procedures described in TIA Technical Report 10-F and incorporatea into our PCS rules[146] are appropriate here. Or are other guidelines needed, and if so, what form should they take?

62. The ***NTIA AWS Assessment*** determined that it would be necessary for Department of Defense precision guided munitions systems to continue to operate in the 1710-1720 MHz band on a primary basis until inventory is exhausted or until December 31, 2008, whichever is earlier.[147] We seek comment on

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[142] 40 dBμV/m is the field strength limit applicable to the 700 MHz bands. 47 C.F.R. § 27.55. 47 dBμV/m is the field strength limit applicable to broadband PCS and WCS. 47 C.F.R. §§ 24.236, 27.55.

[143] 47C.F.R. §§ 22.150, 101.103.

[144] "Licensees in the Cellular Radiotelephone Service **must** coordinate . . . channel usage at each transmitter location within 121 kilometers **(75 miles)** of any transminer locations authorized to other licensees or proposed by tentative selectees or other applicants . . . ." 47 C.F.R. § 22.907.

[145] ***See*** 47 C.F.R. § 27.53(a)(3); ***see*** *also* ***Parr*** 27 *Report* ***and Order,*** 12 FCC Rcd at 10857 ¶ 144 (citing 47 C.F.R. §§ 22.359(iii), 22.917(e), 24.238).

[146] ***See*** 47 C.F.R. § 24.237

[147] ***See NTIA AWS Assessment*** at 12

the extent to which boundary limits, coordination or other mitigation techniques could be used to prevent interference to and from continuing Government operations in this band generally (both co-channel and adjacent channel), and to the precision guided munitions systems in particular.[148]

2. Out-of-Band and Spurious Emission Limits

63. For use **of** the **1710-1755** MHz and **21 10-2155** MHz spectrum, we need to consider interference protection to the following adjacent operations:

- *1675-1700 MHz*—This band **is** allocated in Region **2** on a co-primary basis to the Meteorological Aids Fixed Service, the Meteorological Satellite Service (space-to-Earth), the Mobile Satellite Service (Earth-to-space), and the Mobile Service (except aeronautical mobile). It is used in the United States for meteorological satellites (downlinks) and for meteorological aids (radiosondes).

- *1700-1710 MHz*—This band is allocated in Region **2** on a co-primary basis to the Meteorological-Satellite Service (space-to-Earth), the Mobile-Satellite Service (Earth-to-space), and the Fixed and Mobile (except aeronautical mobile) Services. This band is currently used in the United States ostensibly to support Meteorological-Satellite Service (space-to-Earth) operations.

- The *1755-1850 MHz*—This band is allocated in Region **2** on a primary basis to the Fixed and Mobile Services and to the Space Operation Service (Earth-to-space) by footnote **5.386.** The Federal Government currently uses various radio services in this band to support four main functions: space telecommunications command, tracking, and control; medium capacity fixed microwave services; tactical radio battlefield networks; and aeronautical mobile applications including telemetry, video, target scoring systems, and precision munitions.

- The *2025-2110 MHz*—This band is allocated in Region **2** on a co-primary basis to the Space Operation, Earth Exploration-Satellite, and Space Research Services (Earth-to-space and space-to-space), and *terrestrially* to the Fixed and Mobile Services. In the United States the Federal Government uses this band for various space services, and non-Government users use it for Fixed and Mobile Services, including the **TV** Auxiliary Broadcasting Service (Part **24** of the Commission's **rules),** the Cable TV Relay Service (Part **78).** and the Local TV Transmission Service (Part 101).[149]

- *2155-2160 MHz*—This band is allocated in Region **2** on a primary basis to the Fixed, Mobile, and Mobile-Satellite Services, and is currently used in the United Slates for the Multipoint

[148] Government operations in the 17 10-1755 MHz band at 16 Department of Defense (DOD) sites listed in Appendix **A** to this Notice must be protected for continued military use on an interim basis. The DOD ground systems at **14** of the sites would remain on a secondary coordinated basis, while the systems at Cherry Point, North Carolina, and **Yuma,** Arizona, would operate on **a** primary basis. Additionally, aeronautical telemetry systems will continue to operate at a number of the 16 DOD sites and have the potential for substantial impact on the operations of systems with line of sight to/from the high altitude platforms. We will address appropriate protection measures involving these operations in a future proceeding. We note that NTIA's Reimbursement Order states that "[d]uring the transition period, all incumbent Government systems will remain on a primary basis and must be protected by the non-Govemment licensee." ***NTIA Reimbursement Order,*** *67* Fed. Reg. *at* **41** 184 ¶ 18.

[149] The ***NTIA AWS Assessment*** indicated that the FCC would conclude the necessary rulemaking by September 2004 to permanently modify footnote **US346** of the U.S. Table of Allocations to allow DOD the use of the 2025-2110 MHz band on a co-equal primary basis for DOD ground stations at selected sites that support DOD space operations. This will be addressed in a future rulemaking.

Distribution Service under Part 21 of the Commission's rules and for the Fixed Microwave Service under Part 101 of the Commission's rules.

- 2160-2165 *MHz*— This band is allocated in Region 2 on a primary basis to the Fixed, Mobile, and Mobile-Satellite Services. Currently, the hand is used in the United States primarily for non-Federal Government Fixed and Mobile Services licensed under the Fixed Microwave Service in Part 101 of the Commission's rules, the Public Mobile Services under Part 22 of the Commission's rules, and the Domestic Public Fixed Radio Services under Part 21 of the Commission's rules.

- *2165-2200 MHz*— The 2165-2170 MHz band is allocated to the Mobile-Satellite Service on a primary basis for space-to-Earth (downlink) transmissions in Region 2. The 2170-2200 MHz band is allocated to the Mobile-Satellite Service on a primary basis fur space-to-Earth transmissions throughout the world. The 2165-2200 MHz band is also allocated to the Fixed and Mobile Services on a primary basis throughout the world. Currently, the 2165-2200 MHz band is used in the United States for the Mobile Satellite Service (MSS). Fixed services also operate in the 2165-2200 MHz hand, but are subject to relocation by MSS licensees.

64. In the recent past we have taken two approaches to ensure interference protection of services outside a licensee's assigned spectrum, without the need to impose guard bands. For PCS we require licensees to attenuate the out-of-band power below the transmitter power (P) by ai least $43 + 10 \log_{10}(P)$ watts.[150] In contrast, for WCS we specify different attenuations, depending on the frequency band being protected and whether the system involves fixed, mobile, or other communications.'" In both cases we retain discretion to require greater attenuation if out-of-band emissions cause harmful interference.'" Since licensees in the 1710-1755 MHz and 2110-2155 MHz bands may use the spectrum for various services, we tentatively conclude that we should develop out-of-band emission limits that can accommodate each type of communications, as we did for WCS. We seek comment on this view, and on what limitations are feasible and appropriate.

3. Power Limits; Band Plans

65. We seek comment on what limits for effective isotropic radiated power (EIRP) are necessary or appropriate under either a coordination or field strength limit approach. We observe that transmitters used in the private land mobile service, cellular radio service. and fixed microwave services typically employ substantially different transmitter power levels. And the output powers of potential Government co-channel users could even range much higher than typical non-Government users. Accordingly, we invite comment as to what these limits should be and the basis for the suggested limits. We also solicit views as to whether we should establish limits on output power for all transmitters, or just mobile equipment, or just base station equipment. We seek comment on the extent to which the power limits that are to be established in this rulemaking should affect our adoption of a paired or unpaired band structure,

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[150] *See* 47 C.F.R. § 24.238(a). We note that some current PCS licensees (Sprin: and Verizon, for example) are providing 3G-like services at selected locations throughout the United States. which suggests that this level may be appropriate for proposed operations in these bands as well.

[151] The attenuation requirements for WCS are $80 + 10 \log_{10}(P)$ dB on all frequencies between 2320 and 2345 MHz, for fixed, land and radiolocation land stations; $110 + 10 \log_{10}(P)$ dB on all frequencies between 2320 and 2345 MHz, for mobile and radiolocation mobile stations: $70 + 10 \log_{10}(P)$ dB on all frequencies below 2300 MHz and above 2370 MHz, for all stations; and $43 + 10 \log_{10}(P)$ dB on all frequencies between 2300 and 2320 MHz and on all frequencies between 2345 and 2370 MHz that are outside the licensed bands of operation, for all stations. 47 C.F.R. § 27.53(a).

[152] See47 C.F.R. §§ 24.238(e), 27.53(f).

and vice versa. We also seek comment on whether to permit higher limits in rural areas than in urban areas, and if so what the different limits should be.

66. If we decide to adopt a paired band architecture for the 1710-1755 MHz and 2110-2155 MHz bands, we seek comment on whether we should allow the use of both base and mobile transmitters in both bands. We note that in reaching its conclusion that there would be little likelihood of 3G systems interfering with Government operations in this band, NTIA "envisioned that the 2110-2170 MHz band could be use[d] for the base station part of 3G and the 1710-1770 MHz band for the hand-held units."[153] This is consistent with the manner in which paired frequency bands are generally used to support mobile services (*i.e.*, lower frequency band used for mobile transmit; higher frequency band for base station transmit).[154] Commenters addressing this issue should identify the advantages and disadvantages of providing flexibility here, including compatibility with band plans in other nations, and what the power limits should be if we allow this flexibility. We **also** seek comment on what extent we should adopt power limits or out-of-band emission limits for these bands that are aimed at enabling TDD operations, or operations that are based on some other form of technology. Comments should address both the methodology to be used, *e.g.*, whether the power limits should be the same or different for the bands, and the specific power levels to be adopted.

67. Finally, consideration must be given to potential duplexing techniques and any transmit/receive separation requirements. We therefore seek comment on the technical ramifications of potential band segmentation plans, and on techniques for dual use based on advanced modulation techniques, antenna technology, or other advanced methods for channelization.

4. RF Safety

68. Commission rules implementing the National Environmental Policy Act of 1969 are intended to prevent human exposure to potentially unsafe levels of radiofrequency (RF) radiation.[155] To that end, section 1.1307(b) of our rules **requires** preparation of Environmental Assessments when licensees propose to construct fixed transmission facilities that exceed specified parameters.[156] Exposure guidelines for the 2.3 GHz WCS band are the same as those for spectrum at 1710-1755 MHz and 2110-2155 MHz.[157] For WCS, the threshold for environmental review is an effective radiated power (ERP) greater than 1,000 watts."[158]

69. With regard to RF safety requirements, the Commission adopted the 1,000 watts ERP threshold for 2.3 GHz to recognize the flexibility with respect to use, power, location, and other factors that was accorded licensees operating in that band, and determined that this power limit was appropriate

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[153] *NTIA AWS* Assessment at 6

[154] For example, the cellular pairing at 824-849/869-894 MHz is codified at 47 C.F.R. § 22.905. The broadband PCS pairing at 1850-1910/1930-1990 MHz has not been similarly codified, but as a practical matter, broadband PCS operate **using** the lower band for mobile *transmit* and the upper band for base station transmit.

[155] See 47 C.F.R. §§ 1.1310, 2.1093.

[156] 47 C.F.R. § 1.1307(b). Similarly, sections 2.1091 and 2.1093 require environmental evaluation of certain mobile and portable transmitters prior to equipment authorization or use. *See* 47 C.F.R. §§ 2.1091, 2.1093. The Commission provides guidance on acceptable methods of evaluating compliance with exposure limits in OET Bulletin No. 65. OET Bulletin No. 65 (Edition 97-01) was issued on August 25, 1997, and is available for downloading at the FCC Web Site: <http://www.fcc.gov/oetlrfsafety>. Copies of OET Bulletin No. 65 also **may** be obtained by calling the FCC RF Safety Line at (202) 418-2464. Other circumstances may also trigger an Environmental Assessment. See generally 47 C.F.R. § 1.1307(a).

[157] *See* 47 C.F.R. § 1.1310

[158] 47 C.F.R. §§ 1.1307(b), 27.52; *see also* 47 C.F.R. § 24.52 (PCS).

to ensure compliance with the Commission's RF exposure standards for most situations.[159] Moreover, the Commission found the 1,000 watts ERP threshold cocsistent with its existing rules for transmitters and devices of comparable use and similar operating frequencies. For the same reasons, we propose to adopt the 1,000 watts ERP safety threshold for fixed operations in the 1710-1755 MHz and 2110-2155 MHz bands. We therefore propose to modify sections 1.1307(b), 2.1091, and 2.1093 of our rules[160] to include services and devices applicable to the 1710-1755 MHz and 2110-2155 MHz bands. We invite comment on this proposal and any alternatives.

5. Other Technical Rules; Canadian and Mexican Coordination

70. Other Technical Rules. The application of general provisions of Part 22, 24 or 27[161] would include rules related to equipment authorization, frequency stability, antenna structures and air navigation, environmental requirements. quiet zones, and disturbance of AM broadcast antenna patterns.[162] We seek comment on applying these provisions to the spectrum that is the subject of this Notice. We propose that all of these technical rules would apply to all licensee: in these bands, including licensees who acquire their licenses through partitioning or disaggregation.

71. Canadian and Mexican Coordination. Section 2.301 of our rules requires stations using radio frequencies to identify their transmissions with a view to eliminate harmful interference and generally enforce applicable radio treaties, conventions. regulations, arrangements, and agreements.[163] With respect to Canada, coordination of frequency assignments in the 1710-1755 MHz band is presently subject to the provisions of Arrangement D of the ***Agreement between the United States of America and Canada concerning Coordination and Use of Radio Frequencies Above 30 Megacycle: per Second***, October 24, 1962, as amended. Additionally, coordination of assignments in the 2110-2155 MHz band is subject to Arrangement A of this Agreement, and assignments in the 2150-2155 MHz band are also subject to the ***Interim Arrangement Concerning the Use of the Frequency Bands 2150-2162 MHz and 2500-2690 MHz by MCS and MDS Stations Near the Canada/United States*** of ***America Border,*** June 25.2002. At this time, changes to international agreements between and among the United States, Mexico and Canada concerning the reallocation of this spectrum are not complete. One option would he to propose certain interim requirements for terrestrial licenses along these borders, and to provide that these licensees will be subject to the provisions contained within future agreements between and among the three countries. Until such time as agreements between the United States. Mexico and Canada become effective, we propose to apply the same technical restnctions at the border that we adopt for operation between geographic service areas, to the extent they are not in violation of current bilateral agreements and arrangements. Operations must not cause harmful interference across the border. We note that further modification might be necessary in order to comply with future agreements with Canada and Mexico regarding the use of this band. We seek comments on this issue.

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[159] Parr 27 Report and Order, 12 FCC Rcd at 10862¶ 154 n.345, noting that in a pending petition for reconsideration of the RF Guidelines Repon and Order, the Commission was considering whether to revise the threshold for requiring routine evaluation of mobile devices above 1.5 GHz from 1.5 watts to 3 watts. This change was made in Procedures for Reviewing Requests for Relief from State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934, WT Docket No. 97-192, Second *Memorandum* Opinion and Order and Notice of proposed Rulemaking, 12 FCC Rcd 13494, 13541¶ 51 (1997).

[160] 47C.F.R. §§ 1.1307(b), 2.1091, 2.1093.

[161] *See supra* ¶¶ 13-14.

[162] See, *e.g.*, 41 C.F.R. §§ 22.351-22.383, 24.50-24.55, 27.50-27.66

[163] See47 C.F.R. § 2.301.

D. Competitive Bidding

1. Assignment of Licenses

72. As discussed above, section 3002 of the Balanced Budget Act of 1997 requires the Commission to assign licenses for the majority of the AWS bands through competitive bidding pursuant to section 309(j) of the Communications Act.[164] The Commission has tentatively concluded that it serves the public interest to license all portions of the AWS bands, including the 2150-2155 MHz portion of the 2110-2155 MHz band, by the same mechanism.[165] Accordingly, assuming we adopt a licensing scheme that permits the filing of mutually exclusive applications, consistent with both statutory obligations, we will resolve such applications for licenses in these bands through competitive bidding.[166] Accordingly, we request comment on a number of issues relating to the competitive bidding procedures for these bands.

73. We propose to conduct the auction of initial licenses in the 1710-1755 MHz and 2110-2155 MHz bands in conformity with the general competitive bidding rules set forth in Part 1, Subpart Q, of the Commission's rules, and substantially consistent with the bidding procedures that have been employed in previous auctions.[167] Specifically, we propose to employ the Part 1 rules governing competitive bidding design, designated entities, application and payment procedures, reporting requirements, collusion issues, and unjust enrichment.[168] Under this proposal, such rules would be subject to any modifications that the Commission may adopt in our Part 1 proceeding.[169] We seek comment on whether any of our Part 1 rules or other auction procedures would be inappropriate or should be modified for an auction of licenses in these bands.

2. Provisions for Designated Entities

74. In authorizing the Commission to use competitive bidding, Congress mandated that the Commission "ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services."[170] In addition, section 309(j)(3)(B) of the Act provides that in establishing eligibility criteria and bidding methodologies, the Commission shall promote "economic opportunity and competition . . . by avoiding excessive concentration of licenses and by disseminating licenses among a

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[164] ***See supra*** ¶ 15. The Balanced Budget Act of 1997 identified the 1710-1755 MHz band for competitive bidding in section 3002(c) and the 2110-2150 MHz band in section 3002(b). Pub. L. No. 105-33, 111 Stat. 251 (1997). The timing requirements applicable to both these bands were recently rescinded. Auction Reform Act of 2002, Pub. L. No. 107-195, 116 Stat. 715 (2002).

[165] ***See supra*** ¶ 15.

[166] ***See supra*** ¶¶ 15-24.

[167] ***See, e.g.***, Amendment of Part 1 of the Commission's Rules—Competitive Bidding Procedures, WT Docket No. 97-82, ***Order, Memorandum Opinion and Order and Notice of Proposed Rule Making,*** 12 FCC Rcd 5686 (1997); ***Third Report and Order and Second Further Notice of Proposed Rule Making.*** 13 FCC Rcd 374 (1997) ***(Part 1 Third Report and Order); Order on Reconsideration of the Third Report and Order. Fifth Report and Order, and Fourth Further Notice of Proposed Rule Making,*** 15 FCC Rcd 15293 (2000) ***(Part 1 Recon Order/ Fifth Report and Order*** and ***Fourth Further Notice of Proposed Rule Making); Seventh Report and Order,*** 16 FCC Rcd 17546 (2001); ***Eighth Report and Order,*** 17 FCC Rcd 2962 (2002).

[168] 47 C.F.R. § 1.2101 ***et seq***

[169] ***See Fourth Further Notice of Proposed Rule Making,*** 15 FCC Rcd 15293 (2000); ***see also Part 1 Recon Order/Fifth Report and Order,*** 15 FCC Rcd 15293 ***(recon. pending).***

[170] 47 U.S.C. § 309(j)(4)(D).

wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women."[171]

75. In the ***Competitive Bidding Second Memorandum Opinion and Order,*** the Commission stated that it would define eligibility requirements for small businesses on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate threshold.[172] The ***Part 1 Third Report and Order,*** while it standardizes many auction rules, provides that the Commission will continue a service-by-service approach to defining small businesses.[173]

76. Certain commenters, in response to the ***AWS Allocation*** *NPRM,* the ***AWS Allocation Further*** *NPRM,* and the ***NTIA AWS Assessment,*** have suggested a variety of advanced wireless services, including, but not limited to, voice, video, internet, and high speed data services for the 1710-1755 MHz and 2110-2155 MHz bands.[174] We do not know precisely the type of services that a licensee may seek to provide in these bands. Nonetheless, we anticipate that the services that will be deployed in these bands may have capital requirements comparable to those in the broadband PCS service. We also believe that the licensees in these bands will be presented with issues and costs similar to those presented to broadband PCS licensees, including those involved in relocating incumbents, and developing markets, technologies, and services. Finally, we note that at the time the broadband PCS service was established, it was similarly anticipated that it would facilitate the introduction of a new generation of services.[175]

77. In light of the similarities we have identified, we therefore propose to adopt here the same small business size standards the Commission adopted for broadband PCS.[176] Accordingly, we propose to define a small business as an entity with average annual gross revenues for the preceding three years not exceeding $40 million, and a very small business as an entity with average annual gross revenues for the preceding three years not exceeding $15 million.[177] We also propose to provide small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent. The bidding credits we propose here are those set forth in the standardized schedule in Part 1 of our Rules.[178] We seek

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[171] 47 U.S.C. § 309(j)(3)(B).

[172] Implementation of Section 309(j) of the Communications Act—Competitive Elidding, PP Docket No. 93-253, ***Second Memorandum Opinion and Order.*** 9 FCC Rcd 7245,7269 ¶ 145 (1994) (*Competitive* ***Bidding Second Memorandum Opinion and Order***); 47 C.F.R. § 1.2110(c)(1).

[173] *Part 1 Third Report and Order*, 13 FCC Rcd at 388 ¶ 18; 47 C.F.R. § 1.2110 (c)(1).

[174] Qualcomm Comments at 3, filed on Feb. 22, 2001 in response to the ***AWS Allocation*** *NPRM*; Lucent Comments at 1, filed on **Aug.** 28,2000 in response to the Office of Engineering and Technology's (OET) request for comment on the petition tiled by the Cellular Telecommunications Industry Association (CITA); and Nokia Comments at **2** filed on Aug. 28, 2000, in response to the Commission's ***Public Norice,*** DA 00-1673 (rel. July 28, 2000) and the petition filed by CTIA.

[178] Implementation of Section 309(j) of the Communications Act—Competitive Bidding, *Fifth* ***Reporr and Order,*** 9 FCC Rcd 5532,5534 ¶ 3 (1994) (*Competitive* ***Bidding*** *Fifth* ***Reporr and Order).***

[176] *Id.* at 5581-82 ¶ 115,5591 ¶ 133, 5608 ¶ 175; Implementation of Section 309(j) of the Communications Act—Competitive Bidding, PP Docket No. 93-253, ***Order on Reconsideration,*** 15 FCC Rcd 17384, 17394¶ 21 (2000) (summarizing the bidding credits offered in broadband PCS C and F Block auctions); 47 C.F.R. § 24.720 (1994). The Commission also adopted the PCS standards for WCS in the 2.3 GHz band. ***Part 27 Reporr and Order,*** 12 FCC Rcd at 10879¶ 194 (employing the small business size standards used in broadband PCS, because "the advantages of ready availability and familiarity to many small businesses that might be interested in this spectrum").

[177] We are coordinating these proposed small business size standards with the U.S. Small Business Administration.

[178] **In** the ***Part 1 Third Reporr and Order,*** we adopted a standard schedule of bidding credits, the levels of which were developed based on our auction experience. ***Parr 1 Third Reporr and Order,*** 13 FCC Rcd at 403-04 ¶ 47; *see also* 47 C.F.R. § 1.2110(f)(2).

comment on the use of these standards and associated bidding credits for applicants to be licensed in the 1710-1755 MHz and 2110-2155 MHz bands, with particular focus on the appropriate definitions of small and very small businesses as they relate to the size of the geographic area to be covered and the spectrum allocated to each license. In discussing these issues, commenters are requested to address the expected capital requirements for services in these bands and other characteristics of the service. Commenters are also invited to use comparisons with other services for which the Commission has already established auction procedures as a basis for their comments regarding the appropriate small business size standards.

78. In developing these proposals, we acknowledge the difficulty in accurately predicting the market forces that will exist at the time these frequencies are licensed. Thus, our forecasts of types of services that will be offered over these bands may require adjustment depending upon ongoing technological developments and changes in market conditions. To the extent commenters support a different bidding credit regime, they should support their proposals with relevant information on the types of system architecture that are likely to be deployed in these bands, the availability of equipment, market conditions, and other factors that may affect the capital requirements of the types of services that may be provided.

79. We believe that the small business size standards and corresponding bidding credits proposed above would provide a variety of businesses with opportunities to participate in the auction of licenses for these bands and afford licensees substantial flexibility for the provision of services with varying capital costs.[179] In making this proposal, however, we observe that the capital costs of operational facilities in the 1710-1755 MHz and 2110-2155 MHz bands may vary widely. Commenters suggest that the AWS service has the potential to make a significant impact on the U.S. economy through the revenues generated by consumer demand for the expanded offering of wireless services."[180] Although AWS services may have significant advantages in terms of economies of scale compared to other services, the development of AWS services may require an unprecedented investment of capital by prospective licensees. Accordingly, we invite comment on whether there may be any distinctive characteristics to the AWS service or these bands that suggest that the adoption of small business size definitions and the use of bidding credits would be inappropriate in this instance.

80. We also seek comment on whether the small business provisions we propose today are sufficient to promote participation by businesses owned by minorities and women, as well as rural telephone companies. To the extent that commenters propose additional provisions to ensure participation by minority-owned or women-owned businesses, they should address how such provisions should be crafted to meet the relevant standards of judicial review."[181]

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[179] ***Id.***

[180] Motorola noted that "the Council of Economic Advisers (CEA) estimates that an allocation of spectrum for 3G services would provide additional service revenues of $38-47 billion per year to the U.S. economy." Comments of Motorola, Inc. at 6-8, filed Oct. 22, 2001, in response to the ***AWS Allocation Further NPRM*** (*citing* the President's Council of Economic Advisors Report, ***Economic Impact of Third-Generation Wireless Technology***).

[181] ***Adarand Constructors v. Peña***, 515 U.S. *200* (1995)(requiring a strict scrutiny standard of review for Congressionally mandated race-conscious measures); *United* ***States v. Virginia,*** 518 U.S. 515 (1996)(applying an intermediate standard of review to a state program based on gender classification).

IV. PROCEDURAL MATTERS

A. *Ex Parte* Rules – Permit-But-Disclose

81. This is a permit-but-disclose notice and comment rulemaking proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed pursuant to the Commission's rules.'**

B. Comment Period and Procedures

82. Pursuant to applicable procedures set forth in sections 1.415 and 1.419 of the Commission's rules,'" interested parties may file comments on this Notice on or before February 7, 2003, and reply comments on or before March 14,2003. Comments and reply comments should be filed in WT Docket No. 02-353, and may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies.[184] All relevant and timely comments will be considered by the Commission before final action is taken in this proceeding.

83. Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/e-file/ecfs.html>. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address. and the applicable docket number. Parties may also submit an electronic comment by e-mail via the Internet. To obtain filing instructions for e-mail comments, commenters should send an e-mail to <ecfs@fcc.gov>, and should include the following words in the body of the message: "get form <your e-mail address>." A sample form and directions will be sent in reply.

84. Parties who choose to file by paper must file an original and four copies of each filing. If parties want each Commissioner to receive a personal copy of their comments, they must file an original plus nine copies. All filings must be sent to the Commission's Secretary, Marlene H. Dortch, Office of the Secretary, Federal Communications Commission, 445 12" Street, S.W., Room TW-A325, Washington, D.C. 20554. Furthermore, parties are requested to provide courtesy copies for the following Commission staff: (1) John Spencer and Eli Johnson, Policy Division, Wireless Telecommunications Bureau, Federal Communications Commission, 445 12" Street, S.W., Room. 3-C124, Washington, D.C. 20554; and (2) *Gary* Michaels and Andrea Kelly, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, 445 12th Street, S.W., Room. 4-A760, Washington, D.C. 20554. One copy of each filing (together with a diskette copy, as indicated below) should also be sent to the Commission's copy contractor, Qualex International, Portals 11,445 12th Street, S.W., CY-B4202, Washington, D.C. 20554.

85. Parties who choose to file by paper should also submit their comments on diskette. These diskettes should be attached to the original paper filing submitted to the Office of the Secretary. Such a submission should be on a 3.5 inch diskette formatted in an IBM compatible format using Microsoft ™ Word 97 for Windows or compatible software. The diskette should be accompanied by a cover letter and should be submitted in "read only" mode. The diskette should be clearly labeled with the commenter's name, proceeding, type of pleading (comment or reply comment), date of submission, and the name of the electronic file on the diskette. The label should also include the following phrase "Disk Copy – Not an Original." Each diskette should contain only one party's pleadings, preferably in a single electronic file. In addition, commenters should send diskette copies to the Commission's copy contractor, Qualex International, Portals 11,445 12th Street, S.W., CY-B4202, Washington, D.C. 20554.

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[182] *See generally* 47 C.F.R. §§ 1.1202, 1.1203, 1.1206.

[183] 47 C.F.R. §§ 1.415, 1.419.

[184] *Electronic Filing of Documents in Rulemaking Proceedings,* 63 Fed. Reg. 24121 (1998).

86. The public may view the documents filed in this proceeding during regular business hours in the FCC Reference Information Center, Federal Communications Commission, 445 12th Street, S.W., Room CY-A257, Washington, D. C. 20554, and on the Commission's Internet Home Page: <http:l/www.fcc.gov>. Copies of comments and reply comments are also available through the Commission's duplicating contractor: Qualex International, Portals 11,445 12'' Street, S.W., CY-B4202, Washington, D.C. 20554 (telephone 202-863-2893). Accessible formats (computer diskettes, large print, audio recording and Braille) are available to persons with disabilities by contacting Brian Millin, of the Consumer & Governmental Affairs Bureau, at (202) 418-7426, TTY (202) 418-7365, or at bmillin@fcc.gov.

C. Initial Regulatory Flexibility Analysis

87. **As** required by the Regulatory Flexibility Act of 1980 (RFA),[185] the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities ***of*** the policies and rules proposed in the Notice. The analysis **is** *found* in Appendix B. We request written public comment on the analysis. Comments must be filed by February 7,2003, and must have a separate and distinct heading designating them as responses to the **JRFA.** The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this Notice, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

D. Initial Paperwork Reduction Analysis

88. This Notice **may** contain proposed information collections. As part of our continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this Notice, as required by the Paperwork Reduction Act of 1995.[186] Comments should address: (a) whether the proposed collection of information **is** necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

89. Written comments by the public and agencies on the proposed information collections are due February 14,2003. Written comments by the OMB on the proposed and/or modified information collections are due on or before April 21,2003. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Judith Boley Herman, Federal Communications Commission, 445 12th Street, S.W., Room 1-C804, Washington, D.C. 20554, or via the Internet tojboley@fcc.gov, and to Kim A. Johnson, Policy Analyst, Office of Information and Regulatory Affairs (OIRA), Office of Management and Budget (OMB), Docket Library, Room 10236, New Executive Office Building (NEOB), 725 17th Street, N.W., Washington, D.C. 20503 or via the Internet at Kim_A._Johnson@omb.eop.gov.

E. Further Information

90. For further information concerning this rulemaking proceeding, contact John Spencer or Eli Johnson, at (202) 418-13 10, Policy Division, Wireless Telecommunications Bureau, Federal Communications Commission, 445 12th Street, S.W., Room. 3-C124, Washington, D.C. 20554; or via the Internet to <jspencer@fcc.gov> or <ejohnson@fcc.gov>.

[185] 5 U.S.C. § *603.*

[186] Pub. L. No. 104-13

V. ORDERING CLAUSES

91. Accordingly, IT IS ORDERED pursuant to sections 1, 2, 4(i), 7, 10,201,214,301,302,303. 307,308,309,310,319,324,332 and 333 of the Communications Act of 1934, 47 U.S.C. §§ 151, 152, 154(i), 157, 160,201,214,301,302,303,307,308, 309, 310, 319,324, 332,333, that this Notice of Proposed Rulemaking is hereby ADOPTED.

92. IT IS FURTHER ORDERED that NOTICE IS HEREBY GIVEN of the proposed regulatory changes described in this Notice, and that comment is sought **on** these proposals.

93. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Notice, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary